

Appendix F: Patrick Vegetation Management Project Comments

Comment Period

The Comment period for the Patrick Vegetation Management Project started on 4/29/2021. The Responsible Official requested comments back within 30 calendar days. While comments may be submitted at any time, for the purposes of this comment period, comments were accepted through 6/1/2021.

Parties Responding to Comment

Table 1: Parties that Responded

Name	Acronym	Project File Document Name
Baker County	BC	20210527_Patrick_BakerCountyCommentLetter
Oregon Wild	OW	20210528_Patrick_OregonWildCommentLetter
Greater Hells Canyon Council	GHCC	20210601_Patrick_GreaterHellsCanyonCouncilCommentLetter
Blue Mountains Biodiversity Project	BMBP	20210601_Patrick_BlueMountainsBiodiversityProjectCommentLetter

Comment Analysis & Response

Comments were reviewed by the interdisciplinary team (ID team) to determine if issues or concerns were raised that demonstrated a clear cause-effect relationship and if recommendations/remedies were suggested that would address the issue/concern. If comments were supportive in nature and provided no issues/concerns or recommendations, they are not analyzed further in this document but are included in the project record.

Summary of Draft EA Comments

Comment	Commenter & Number	Specialist(s) to respond	Response (brief response or where to find it addressed in EA or project file- or why not relevant)
The overall goal of the Patrick project should be to achieve ecological, social and economic resilience on a project size scale	BC-1	Silviculture	Thank you for your comment. The Patrick project purpose and need as well as proposed actions account for all of these aspects. See EA and

that promotes forest health and resiliency and sustainable communities.			associated reports for more details.
Basing the desired condition solely on HRV especially using unmanaged disturbance patterns is not defensible. Left in an unmanaged condition forest would be periodically devastated by wildfire or at the other end of the spectrum overgrown with fuels. Either scenario leaves a forest that evolves and changes to meet the growing conditions at that time. Promoting the idea that a forest is static, or not naturally diverging, is a dismissal of the idea of vegetation succession (or evolution).	BC-2	Silviculture	<p>See response to comment BMBP-70 & 74. Range of variation (RV) analysis is based on the continued changing conditions of a forest not a static condition. This is the reason that a range of conditions are generated through this type of analysis rather than a discrete, static level of measurables. “RV is not intended to portray a static, unchanging condition. Ecosystems of the interior Pacific Northwest evolved with a steady diet of wildfire, insect outbreaks, disease epidemics, floods, landslides, human uses, and weather cycles. Change was and is the only constant in their development. RV is designed to characterize the range of vegetation composition, structure, and density produced by these agents of change” (Powell 2012, Morgan et al. 1994).</p> <p>Disturbance agents such as wildfire as mentioned in this comment are part of the disturbance regimes that are modeled to determine a range of vegetation conditions which we strive to manage toward.</p>
All tree even those over 21” or 150 years old should be removed to reduce the spread of insect and disease.	BC-3	Silviculture	An analysis of existing conditions determined that there currently is not a need to remove trees that are 21 inches dbh or greater. See EA page 14.
It is imperative that riparian areas are brought back to ecologically sustainable systems through the use of every available action. This includes commercial thinning, non-commercial thinning and prescription burning.	BC-4	Silviculture/Aquatics	The existing condition of RHCAs were analyzed to determine if there is a need for treatment in order to move toward desired conditions and restore ecological function. Alternative 2 (proposed Action) includes commercial thinning in the outer portion of identified RHCAs. Prescribed burning and non-commercial thinning are also proposed within identified RHCAs under this alternative to move these critical areas toward

			desired conditions. See proposed action on pages 14-30 of EA for more detail.
Wildlife: Baker County is adamantly against “security areas”. The creation of “security areas” is a means to reduce the amount of public land that the public can use without going through the proper NEPA process to justify the take, especially regarding the closure of roads. (page 2)	BC-5	Wildlife	The negative effects to wildlife from roads have been documented extensively (EA at 114,117). Managing for multiple uses of the forest requires that some areas be free from motorized disturbance in order to maintain viable populations of wildlife as required by the National Forest Management Act (1976). The Wallowa-Whitman Forest Plan (1990) specifically requires that road densities be reduced within elk habitat.
A steady and adequate supply of timber products and the jobs that go with that is essential to economic viability of local communities. Baker county supports the economic opportunity that this project brings and would like a commitment from the forest service for future projects. Without that commitment it is difficult to invest in multimillion-dollar facilities to keep production local.	BC-6	District Ranger	As District Ranger, I recognize the economic importance of having wood processing jobs in Baker County. The closing of the Ellingson Lumber Company sawmill in 1996 took away important income from the county and jobs that had supported generations of local citizens. These are real people, and I know and sincerely respect and appreciate many of them. I also recognize that a long-term, steady supply is necessary to attract investment in processing facilities. There appears to be a sustained land management need in the area of fire resiliency on Forest Service lands in Baker County to harvest timber. This is consistent with our current Forest Plan and agency mission. There is nine years of increased funding to locally perform work that can be expected to produce commercial timber under the Collaborative Forest Landscape Restoration Program. We have commercial timber harvests planned in the Baker City Watershed Protection Project. We also are starting pre-planning work a vegetation management in a project of approximately 43,000 acres near Halfway, Oregon. While we are far from making any decisions in that project, it is likely that a vegetation management project of

			<p>this size would produce commercial timber. Beyond these factors, making firm “commitments” out in the future for timber volume from Forest Service lands is difficult. Current line officers can’t predict changes in Presidential agendas, Congressional funding and legislation, and Federal Court rulings. There are also multiple processing facilities in adjacent counties that have large capacities for various forest products. The landscape where supply and demand issues are salient for attracting new facilities, for types of wood products currently processed in the area, extends across an area that is much larger than Baker County.</p>
<p>Baker County is currently under the 1990 Blue Mountains Resource Management Plan that states that our forest is “open”. Therefore, all roads are considered “system roads” and any decommissioning of roads conflicts with the plan. (page 2)</p>	BC-7	Transportation, NEPA	<p>Roads in the Forest road system are considered for decommissioning in NEPA analysis where needed to manage the road system to minimize or mitigate impacts to other resources.</p>
<p>Access: Roads that are created or repaired during the Patrick project should remain open and promoted for use to facilitate citizens collecting wood for no less than 10-years post project completion. (page 3)</p>	BC-8	Transportation	<p>The road system on the Forest is actively managed to provide access, minimize impacts to natural resources, meet user needs, and be within maintenance budgets and prioritized maintenance schedules. The post-harvest storage of system roads in the Patrick area considered and balanced resource needs in determining the proposed actions.</p>
<p>This is a large project with nearly 23,000 acres of commercial logging and 40 miles of road construction which may cause significant effects on the environment and should be analyzed in an EIS.</p>	OW-1	NEPA	<p>The size of a project and associated proposed activities alone do not determine the level of analysis required. It is the significance of effects that determines whether an EIS will be prepared. The proposed actions for the Patrick project were analyzed through a thorough IDT process and a finding of no significant impacts was found.</p>
<p>Group Selection: Group selection is not</p>	OW-2	Silviculture	<p>Snags would not be removed as part of the project</p>

called for ecologically. Creating artificial openings will deprive the forest of valuable snag habitat associated with small scale disturbance and will increase carbon emissions relative to treatments with greater retention of tree and snags. (page 2)			unless they are deemed a safety hazard for operations. The purpose of creating openings is to increase variability in stands that are currently homogenous relative to structure, age and density. In addition, the project area is currently greatly deficient in the stand initiation structural stage. This treatment would help to move forest conditions toward HRV relative to this individual structure stage. Due to elevated insect and disease levels in this project area and prescribed fire small scale disturbances will continue to occur within these stands producing snags over time. The level of tree and snag retention is irrelevant to the level of carbon emissions. Group selection harvests are more efficient than a typical thin from below prescription. The logistics of harvest machinery moving in and around leave trees requires more time and planning within each individual unit than the creation of small openings. Therefore, group selection treatments are often completed more expediently causing less carbon emissions from the logging equipment.
Group Selection: We remain very concerned that almost 2,000 acres of group selection will have many adverse consequences associated with regen harvest and those adverse effects were not adequately disclosed in the EA. (page 2)	OW-3	Silviculture	These are not regeneration harvests. As per the Wallowa Whitman Land and Resource Management Plan, 1991 a regeneration harvest is defined as: "Any harvests which reduces stocking below the minimum crop tree stocking level will be considered a regeneration harvest." This is calculated on a stand level. Group selection harvests would create openings of variable size with the maximum opening being 4 acres. These openings will not be void of overstory trees as all trees greater than 21" dbh would be retained. In the absence of 21" trees early seral tree species will be identified for scattered retention that exhibit the best genetic characteristics to provide

			seed source and protection from natural elements for developing seedlings. The remainder of the stand would be thinned but would remain at or above full stocking requirements. A maximum of 30% of the stand/unit would have created openings resulting in an average stocking level across the stand that is well above minimum crop tree levels.
Make RHCAs separate units. Commercial removal within 150 feet of streams must account for the loss of large wood recruitment caused by removing trees and preventing them from growing and being recruited to streams (and riparian areas). (page 3)	OW-4	Silviculture, Hydrology	<p>The outer portion of the RHCAs in Patrick are similar in vegetation communities to the adjacent uplands. The inner portion of RHCAs are ecologically unique and different. To effectively manage the Patrick Project and future timber sales, it's more efficient to join similar stands that have the same plant association group. Most of the trees in Patrick grow to be approximately 100 feet in height and when those trees fall, that is their zone of influence for large wood recruitment. Trees harvested commercially from 150 feet away and above a road will not impact large wood recruitment.</p> <p>Some RHCA treatments will be delineated into specific units in order to facilitate pre and post treatment monitoring as well as aid in prescription implementation. However, unit boundaries do not dictate prescription. Boundaries are developed during the implementation phase to address treatment needs while accounting for appropriate logging and transportation systems and requirements. Units often have more than one prescription due to many different factors including changing plant associations or protection of other resources (rock outcroppings, caves, moist areas, aspen patches, wildlife habitat, cultural resources, RHCAs, ect.) RHCAs will be</p>

			<p>evaluated separately regardless of unit boundaries and would have specific prescriptions for implementation.</p> <p>The objectives for thinning within RHCAs include reducing densities to increase resiliency to disturbance (wildfire, insects and disease) while increasing growth and vigor of residual trees. Growth rates would be increased within these stands while the threat of complete stand loss through disturbance would be greatly reduced. This would increase the number of large trees within the RHCAs over time conversely increasing the level of large wood recruitment available in these stands.</p> <p>Also see response to GHCC-1</p>
<p>One of the key considerations is to find the optimal mix of treated and untreated patches within and between stands.(page 3)</p> <p>In order to achieve all the objectives for optimal late successional forest conditions, restoration projects must contain both thinned and unthinned patches. Finding the right mix should not be an accident based mostly on operational feasibility and site constraints but should be a conscious decision based on quantitative analysis showing how best to achieve optimal late successional conditions. (page 4)</p>	OW-5	Silviculture	<p>The optimal mix of any attribute within a forest ecosystem that is complex and ever changing is a difficult task. Much of the argument on the optimal level of any forest attribute is scale dependent. The level of overly dense, late seral dominated stands across the Wallowa Whitman National Forest is well above where we should be relative to HRV which exhibits a need for treatment. However, due to many constraining factors we are only able to treat a small proportion of that every year leaving large areas untreated that exhibit a treatment need.</p> <p>Treatment objectives and the need to treat for this project were based on current conditions for species composition, density levels and structural stage relative to HRV not an arbitrary proportion of treated versus non-treated acreage.</p>

			<p>Variability and spatial patterns across the project area would be created through implementation of multiple prescription types which are driven by environmental factors such as plant associations and potential vegetation groups. These prescriptions include a variety of residual stocking levels, creation of openings, riparian enhancements and no treatment areas. In addition, each prescription would include components that increase variability in individual stands. All treatments were analyzed for associated effects through a thorough interdisciplinary team process including effects to wildlife habitat, soils, vegetation, aquatics, hydrology and fuels.</p> <p>The current conditions of these forests have been greatly influenced by the lack of natural wildfire on the landscape. This has produced conditions which are outside of what would be expected under a natural fire regime. The need to treat a large portion of this project area is based on these current conditions and a need to restore the landscape to reflect conditions that would be expected if wildfires occurred in a more natural regime.</p> <p>Also see response OW-11</p>
Instead of an 80/20 mix of treated/untreated areas, consider a variety of combinations such as 60/40, 50/50, 40/60, and 20/80. Note that both the absolute proportion and the spatial pattern of treated and untreated must be considered. (page 4)	OW-6	Silviculture	See response to OW-5
Consider the ecological costs and benefits of both thinned areas and unthinned areas.	OW-7	Silviculture	See response to OW-5
The need for well-distributed patches of	OW-8	Silviculture	See response to OW-5

relatively dense forest where snags are continuously recruited is a good lens through which to think about optimizing the mix of treated and untreated stands, as well as the scale and extent of skips and heavily-thinned “gaps” within treated stands. The agency should consider alternatives with different mixes of treated and untreated areas for this purpose. (page 5)			
The Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) call on agencies to “Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” 40 CFR 1502, 1500.2 (e). The CEQ regulations require that agencies specify “the alternative or alternatives which were considered to be environmentally preferable” (40 CFR § 1505.2(b)). “Environmentally preferable” is interpreted to mean <i>the alternative(s) that would cause the least damage to the biological and physical components of the environment, and which best protects, preserves, and enhances, historic, cultural, and natural resources</i> (CEQ, 40 Most Asked Questions Concerning CEQs National Environmental Policy Act Regulations, 46 Federal Register 18026).” (page 5)	OW-9	NEPA	According to 36 CFR §220.7(b), “An alternative should meet the purpose and need and address one or more significant issues related to the proposed action.” “...no specific number of alternatives is required or prescribed”.
NEPA mandates that an agency “shall to the fullest extent possible: use the NEPA process to identify and assess the	OW-10	NEPA	See response to comment OW-9. Alternative 2, the proposed action addresses the

<p><i>reasonable alternatives</i> to proposed actions that will <i>avoid or minimize adverse effects</i> of these action upon the quality of the human environment.” 40 C.F.R. § 1500.2(e). NEPA also requires the agency to “study, develop, and describe appropriate alternatives to the recommended courses of action in any proposal which involves <i>unresolved conflicts</i> concerning alternative uses of available resources...” Taken together, this means the agency is required to identify an alternative that provides an optimal mix of treated and untreated areas. (page 5)</p>			purpose and need of the project.
<p>The NEPA analysis must recognize the value of untreated areas to provide benefits like dense forest cover, snag recruitment, soil/water quality, carbon storage, etc. Recognize that forests are naturally adaptive and natural processes will accomplish many of the benefits attributed to thinning. (page 5)</p>	OW-11	Silviculture/Wildlife	<p>We do not analyze on the basis of treated versus not treated areas or acreage. The majority of this project area has had some type of past treatment starting in the early 1900s. We evaluate the existing condition of forest vegetation to determine if there is a need for treatment and what type of treatment would be appropriate to move toward desired conditions. The project does have areas that will not be treated as well as areas that would just receive a prescribed burn. See table 11 on page 30-32 of EA for a break of acreage by treatment type. Also, please see response to comment OW-5.</p>
<p>Many restoration goals can be met by simply letting forests grow and proceed through the natural stages of succession, or by working with natural or prescribed fire and then letting forests grow. Haugo et al (2017) looked at forest restoration needs across the dry forests of Oregon and Washington and found -see findings in OW</p>	OW-12	Silviculture	<p>The idea of letting forests grow and allowing for “natural” stages of succession assumes that we are dealing with natural systems not effected by other management considerations on both private and federal or state public lands.</p> <p>Fire suppression activities have been occurring across this landscape for over 100 years. This management activity will continue to occur due to</p>

<p>page 6</p>			<p>the need to protect communities and associated natural resources contained in this landscape.</p> <p>The absence of natural wildfire across these forested landscapes has produced conditions that are outside what would have occurred under a naturally occurring fire regime. Species composition, density levels, stand structure and susceptibility to insect and disease have all been shifted due to this lack of disturbance. Forest fuel levels have also greatly increased (see fuels report) because of this.</p> <p>We have limited ability to allow natural wildfire to burn un-managed due to these existing forest conditions as well as limited staffing, prolonged drought conditions and communities at risk.</p> <p>While we strive to manage as much acreage as possible with prescribed burning, we are also limited by staffing and strict burn windows. Due to the current high densities and fuel levels across much of this project area, thinning would have to occur before we could conduct prescribed burning activities to avoid losing control of the burn or creating higher levels of tree mortality than prescribed.</p> <p>Prescribed burning takes place during the wetter seasons of spring and fall reducing risk of mortality to mature trees and increasing ability to control the burn. Although prescribed burning is an effective tool to reduce ground and some ladder fuels, the effects of burning in these seasons do not completely mimic those that would occur during the normal wildfire months of mid to</p>
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			late summer. The existing forest conditions coupled with the management constraints listed above have produced a need for thinning within this project area.
There are many possible mixes of thinned and unthinned which would produce different mixes of benefits and trade-offs. The agency should consider multiple alternatives and search for an optimal combination of thinned and unthinned patches that best harmonizes competing objectives. (page 7)	OW-13	Silviculture, NEPA	See response to OW- 5 and OW-11 According to 36 CFR §220.7(b)(2), “Proposed action and alternative(s). The EA shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.” (i) When there are no unresolved conflicts concerning alternative uses of available resources (NEPA, section 102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives.
Avoid new road construction. The FS should focus restoration treatments on areas that are accessible from existing roads. This dovetails with the recommendation to optimize treated and untreated areas. Areas that are inaccessible from roads should be considered for non-commercial thinning and prescribed fire or passive management. Where roads are considered necessary, the Fs should make an effort to show that the ecological benefits of logging clearly outweigh the ecological costs of road construction and biomass removal. Our scoping comments asked for road construction to be minimized and for analysis of the impacts of road construction. (page 7)	OW-14	Silviculture, Transportation	There is no new road construction proposed as part of this project. The project does propose temporary road construction in order to access areas proposed for commercial harvest while minimizing effects to other resources. Temporary roads would be rehabilitated upon completion of each implementation project. The effects of temporary road construction was analyzed for effects by each appropriate resource. See soils report, water resources report, aquatics report and wildlife report for greater detail of analysis. Existing roads added to the Forest Road System were determined to be needed to meet management objectives. The status of the post-harvest roads was designed to meet long term Forest Objectives.
The EA must recognize and analyze unroaded area for their full range of values	OW-15	Silviculture, Recreation	There are no designated “un roaded” areas within this project area. Projects are designed in

and account for the degradation of those values caused by commercial logging and heavy equipment. (page 7)			<p>accordance with management direction provided within the 1990 Wallowa-Whitman National Forest Land and Resource Management Plan (LRMP) as Amended. The LRMP delineates the forest into specific management areas and provides standards and guidelines for each of those specific areas. The forest is required to design treatments that are in accordance with LRMP direction associated with each management area.</p> <p>The majority of the area described in the commenters letter falls within Management Area 3, (Timber Production Emphasis and Big Game Winter Range) with a small portion in Management Area 1 (Timber Production Emphasis).</p> <p>In addition, this area is not un-roaded. There are currently multiple Forest Service system roads within this area under various stages of operational maintenance levels. These roads would be utilized for implementation of proposed treatments.</p> <p>This area is not an inventoried roadless area. The lack of road densities within an area regardless of the size of the area does not move it into roadless status.</p> <p>Only thinning and prescribed burning activities are proposed within the area that the commentor has identified as Czar Springs.</p>
The EA also needs to provide a map of the treatments planned within unroaded areas, and an accurate description of the current	OW-16	Silviculture	See proposed treatment map in Appendix C, page 1 and 2 of EA and Appendix D, page 91 of silviculture report. Once again there are no

condition of old roads and past treatments within those areas. (page 7)			designated “un-roaded areas” within the project area.
The FS needs to recognize that unroaded areas provide disproportionate public values such as clean water, biodiversity, carbon storage, recreation, and scenery. (page 8)	OW-17	Recreation	See response to comment OW-15 through 18 “Roaded or unroaded” areas and their impacts on values is not part of the proposed action. The Czar Springs area, approximately 1500 acres, includes closed system roads and user created roads, as well as areas of previous harvest.
The NEPA analysis must clearly disclose the fact that water quality, habitat, scenic values, soil quality, and carbon storage are all better in unroaded areas than roaded areas, and logging will have disproportionately adverse effects on those values. (page 11)	OW-18	Recreation, Silviculture	See response to comment OW-15 through 17 Road closures and vegetation thinning as proposed in the project are analyzed.
The EA analysis of carbon and climate failed to address issues raised during scoping, The Purpose and Need Should Address The Unmet Need for Carbon Storage (page 12)	OW-19	Silviculture	See cumulative effects portion of silviculture report for potential effects of climate change.
Harmonize climate change mitigation and adaptation: We request the Forest Service develop and fully consider a NEPA alternative that harmonizes the competing objectives of climate adaptation/preparation and climate mitigation/carbon storage. (page 13)	OW-20	All	See cumulative effects portion of silviculture report page 63 for potential effects of climate change. Alternative 2 and 3 both consider the effects of climate change and carbon emissions.
The NEPA analysis needs to disclose and consider the fact that logging will result in greenhouse gas emissions that make climate change worse. (page 16)	OW-21	Silviculture	See cumulative effects portion of silviculture report for potential effects of climate change.
The NEPA analysis should consider the adverse climate consequences of GHG emissions caused directly and indirectly by logging. Do not use the boilerplate NEPA	OW-22	Silviculture	CHG emissions generated from implementing the proposed actions of this project would be temporary and short in duration. See cumulative effects portion of silviculture report for potential

language from the regional office which is flawed in many ways: (page 19)			effects of climate change.
Recognize the cumulative nature of the GHG emissions and climate problems. (page 19)	OW-23	Silviculture	See cumulative effects portion of silviculture report for potential effects of climate change.
Don't try to say that this project is harmless because it's not causing deforestation. This is immaterial. All GHG emissions, regardless of the source or how it is labelled, are part of the problem and cause the same climate impacts. (page 19)	OW-24	Silviculture	See cumulative effects portion of silviculture report for potential effects of climate change
Thinning for forest health does not mean logging emissions are justified or mitigated. Logging does not increase the capacity for growing trees. To the contrary, logging harms soil and reduces site productivity. (page 19)	OW-25	Silviculture	<p>The statement "logging harms soils and reduces site productivity" is a generalization and assumes all logging methods and techniques have the same impacts regardless of season, mitigations, logging equipment or soil type and condition.</p> <p>Thinning prescriptions in this project would be designed to reduce densities in order to increase tree growth and vigor. Any given site has a limited capacity to produce biomass, either in the form of many small trees or fewer larger trees. As tree densities move beyond the carrying capacity of a site trees begin to incur increased stress as they compete for the limited resources available. Reducing densities does not increase the carrying capacity of a site. That is determined by site characteristics such as soil type and condition, elevation, aspect, precipitation levels and other competing vegetation. Thinning treatments reduce stocking levels to within the carrying capacity of a site while addressing insect and disease issues as well as favoring an appropriate species composition for the specific site conditions.</p>

			<p>Thinning does increase the growth rate and vigor of residual trees conversely increasing over all stand and forest health. The benefits of thinning and density control is well-studied and documented throughout forests of the western united states. See silviculture report for details and associated literature citations.</p> <p>Impacts to soils and potential loss of soil productivity was evaluated as part of this project. See the soils portion of the EA and soils report for effects to soils and list of mitigations developed specifically for this project.</p>
<p>Do not compare carbon <i>before and after</i> logging. That is an improper framework for NEPA analysis. The proper NEPA framework is to compare the effects of NEPA alternatives over time, so please describe the carbon emissions and carbon storage in the forest over time <i>with and without</i> logging. (page 19)</p>	OW-26	Silviculture	<p>As stated above the carbon emissions created through implementation of the proposed action would be short term with effects being negligible due to the scale of activities relative to the forested environment across the Wallowa Whitman national forest (See cumulative effects portion of silviculture report).</p> <p>Many factors can affect a forest's ability to store and sequester carbon such as large-scale wildfire or mortality from insects and disease. We have the ability to measure factors that increase the risk of these types of events such as density levels, species composition, stand structure and climate trends but have limited ability to predict when these events may occur and the scale they may occur at. Therefore, predicting carbon sequestration and storage over time would be a difficult if not impossible task.</p> <p>The effects analysis compared forest conditions relative to HRV across alternatives. A forest that is within HRV would have increased resiliency to</p>

			<p>disturbance as well as overall health in comparison to a forest that is departed from HRV. This would result in an increased ability for trees to sequester and store carbon compared to the no action alternative which would continue to move conditions away from HRV.</p> <p>The rate of carbon sequestration is greater in vigorous trees with high growth rates compared to trees with declining health and reduced growth rates. A major component of thinning prescriptions for this project would be to remove suppressed and unhealthy trees to favor the healthiest trees in the stand. The overall increased growth rates and healthier forest conditions after thinning would result in an increase in carbon sequestration and storage over time.</p> <p>See the silvicultural report for more details on the comparison of alternatives relative to HRV.</p>
<p>Logging to reduce fire effects does not result in a net increase in forest carbon storage. The agency cannot predict the location, timing, or severity of future wildfires, so most fuel treatments will cause carbon emissions without any offsetting benefits from modified fire behavior. Studies clearly show that the total carbon emissions from logging (plus unavoidable wildfire) are greater than carbon emissions from fire alone. (page 19)</p>	OW-27	Fuels/Fire, Silviculture	<p>Promoting resilience is the most commonly suggested adaptive option discussed in a climate-change context (Dale et al. 2001, Spittlehouse and Stewart 2003). Forest management techniques such as prescribed burning or thinning dense forest, can make forest more resilient to wildfire and decrease fire emissions. Carbon emissions during the implementation of the proposed action would have only a momentary influence on atmospheric carbon concentrations, because carbon will be removed from the atmosphere with time as the forest regrows, further minimizing or mitigating any potential cumulative effects. (Page 60 of EA)</p> <p>The commentor does not provide specifics</p>

			pertaining to the study's they are referencing. We cannot accurately consider or address this statement without knowing what study or data they are referring to. Also see response to comment OW-25.
Carbon storage in wood products is not a useful climate strategy. (page 19)	OW-28	Silviculture	Although carbon is stored within wood products this was not listed as a climate strategy within our analysis.
Treatments within RHCAs should have clear goals and specific prescriptions to meet those goals. RHCAs should not be treated with the same prescriptions as upland units. If the agency decides to move forward with RHCA logging we ask that between now and the final EA, separate unit are developed for the RHCA areas that will be treated and that prescriptions be developed that are tailored to meeting Riparian Management Objectives (RMOs) and Forest Plan Riparian Management Objectives. (page 3)	GHCC-1	Hydrology, Silviculture	Thank you for your comment and shared passion around riparian ecosystems. A goal that is unique in the Patrick EA for riparian areas, as opposed to the uplands, is to increase hardwood cover and to move RHCA conditions closer towards RMOs. Much of the project work within ecological riparian areas is designed to release large tree cohorts that will provide large wood recruitment over time and provide more resiliency for fire, drought and climate change. Also see response to comment OW-4
In the final EA please explain why the agency did not consider active restoration activities designed to improve flow conditions such as creating debris dams using materials from onsite. (page 3)	GHCC-2	Hydrology	The Purpose and Need for this project are tied to the departure from HRV across forest types and the potential to have an uncharacteristic disturbance (fire) outcome within Wildland Urban Interface areas. We did develop a project design criteria to account for your comment. Water Quality – 3, protection of fish habitat that calls for felling all non-commercial thinned materials towards the stream or valley in category 1 RHCAs. Placement of this material into the creek will create debris dams that assist in providing improvements to water storage and aquatic habitat processes.
We also requested that any alternatives that	GHCC-3	Silviculture	This comment assumes that there are inherent

propose temporary road building include a cost-benefit analysis of the purported benefits of the treatment weighed against the negative impacts to wildlife, soil structure, hydrology, etc (page 4)			negative, non-mitigatable effects to soils, wildlife and hydrology from building temporary roads. See associated specialist reports for effects and mitigations for these resources. Also, see response to comment GHCC-4
An alternative that did not build temporary roads was eliminated from detailed study because “not building temporary roads would greatly limit the ability to treat forested areas identified as having a treatment need. The purpose and need for both alternative 2 and 3 would not be met.” No cost benefit analysis was conducted. EA at 14. Please explain this decision further. (page 4)	GHCC-4	Silviculture	<p>NEPA requires that an agency analyze and disclose the potential effects of proposed actions. If the analysis finds that the effects are not significant an Environmental Assessment is prepared and a Finding of No Significant Impact is issued. If it is determined that the effects are significant than an Environmental Impact Statement must be completed to disclose those effects and detail potential mitigations.</p> <p>There is no requirement to develop a cost/benefit analysis with respect to the effects of an action versus the benefit resulting from that action. Benefits such as increased forest health and increased resiliency to large scale disturbance are not discrete, quantitative attributes that can be summed and compared to potential or perceived negative impacts of a management action.</p> <p>The action is proposed in response to the need and then the effects of that proposed action are analyzed to determine if there are negative effects and the potential magnitude of those effects.</p> <p>An analysis of the project area determined that there was a need to treat forest vegetation due to the gap between the existing conditions and desired conditions. The analysis also determined that construction of temporary roads would be necessary in order to implement the proposed action required to address this disparity in</p>

			<p>conditions. The effects of that proposed action was then analyzed by all of the potential effected resources.</p> <p>An alternative without temporary roads would not meet the purpose and need of the project. Therefore, further analysis of such an alternative would be outside the scale and purpose and need of the project.</p> <p>Also see response to comments GHCC-3</p>
<p>In our scoping comments we also noted that alternatives must meet existing Wallowa-Whitman forest plan direction for open road density. Since the project area already exceeds allowable open road densities, the alternatives must include closing roads. Otherwise there is no way to meet this legal mandate. The action alternatives do propose approximately 15 miles of road closures. We appreciate this. However, even with these closures, road densities would continue to exceed Forest Plan standards in subwatersheds that are currently exceeding standards. EA at 118. Standards are mandatory constraints on project activities. Unlike guidelines, they are not discretionary. We ask that between now and the final EA an alternative is developed that will allow the Forest Service to become compliant with its own Forest Plan standards. (page 4)</p>	GHCC-5	Transportation, Wildlife	<p>The actions proposed move towards the plan standards and are not required to fully move to the Standard with each individual planned action.</p>
<p>In our scoping comments we also asked that the Forest move towards compliance with the Travel Management Rule within the project area and that the final decision for</p>	GHCC-6	Transportation	<p>Moving of the Patrick area to closure to cross country travel without the creation of an MVUM for the Forest and Forest wide or large scale closure to cross country travel is not considered</p>

Patrick include 5 closure of cross-country travel. This request was not addressed in the EA or the Transportation Report. (page 4,5)			appropriate management action because it would create inconsistent management across the Forest. Closure of a proportionally small area of the Forest would be inconsistent with overall travel management on the Forest and would be difficult to implement and confusing to public users. Targeted road management of the Patrick area to meet objectives was considered to be the appropriate management tool to meet objectives for this area.
Under both action alternatives, some of the project area would lack sufficient hiding cover after harvest and prescribed fire. Both alternatives would exacerbate the adverse effects from open roads by causing elk to leave the area or become more vulnerable to legal and illegal harvest. EA at 120. These alternatives would result in an increase in HEI values resulting from the increase in acres greater than 0.5 miles from an open road. Under both action alternatives, HEI values would exceed the Forest Plan standard of 0.5 and would bring the HEI closer to the desired average of 0.62 in summer range. EA at 120. This analysis illustrates the impacts of an overloaded landscape to an important Wildlife species. Project activities are going to adversely affect cover and therefore add to adverse effects to elk habitat. This further underscores the importance of closing additional roads within the Patrick project area. (page 5)	GHCC-7	Wildlife	See EA pages 120-122 for effects to elk cover and elk habitat.
However, the analysis and associated action alternatives do not consider how many green trees are needed at what density in	GHCC-8	Wildlife	See EA page 130 for effects to snags. Generally, green tree replacements (GTRs) need to be retained at a rate of 16-74 trees per acre,

order to recruit sufficient snags over time (both short and longterm) to achieve 50-80% DecAID tolerance levels across the project area. Logged areas will not recruit adequate numbers of snags and dead wood habitat over time. This must be considered and addressed especially since this project is proposing a “wall-to-wall” treatment approach and actively treating most of the project area. (page 6)			<p>depending on the biophysical group, estimated rotation, pre-commercial and commercial thinning, and average stand diameter (Schommer et al. 1993)</p> <p>See EA page 130. Both action alternatives have the potential to reduce snags within proposed treatment areas. However, post-harvest availability of snags within the project are is expected to be similar to existing conditions, including low to moderate snag availability.</p>
Grazing Impacts: The Patrick Rangeland Resource Report focuses on the project’s impacts to range resources, including the cumulative impacts. It does not address the cumulative impacts of logging and grazing or how reducing grazing activities in logged and burned areas would better meet the purpose and need and reduce cumulative adverse impacts. This is not sufficient. Our scoping comments outlined the many cumulative impacts to forest health and riparian conditions from grazing and logging. This must at least be addressed in the final EA.(page 6)	GHCC-9	Range	<p>During and after the implementation of the Patrick project activities all grazing pastures that are in the project will be administered to Forest Plan Standards and Guidelines (See Wallowa Whitman Land and Resource Management Plan pg. 4-51 and 4-54).</p> <p>Also, modifications to grazing instructions could be initiated if needed which includes altered rotation timing (to allow for regrowth and seed production on burned areas), decreases in allowable use through more stringent utilization standards, avoidance of burned areas, or a combination.</p>
Moist-Mixed Conifer Forests: It does not appear that the EA considered the risk of uncharacteristic wildlife and reduced ecological function that would result from logging in these PVG. We request that the Forest Service take a hard look at this issue in the final EA. (page 6)	GHCC-10	Silviculture, Wildlife	See EA page 138. A mosaic of unique and sensitive habitat conditions capable of supporting breeding wildlife populations would still exist if the project is implemented. There would be no effect to unique and sensitive habitats, such as habitats within moist-mixed conifer forests, from the proposed project.

			<p>The effects of treatments within moist upland forests were analyzed through a thorough interdisciplinary team process. See EA and associated specialists report for detailed analysis.</p>
<p>The purpose and Need for the Patrick timber sale is overly narrowly construed so as to preclude a full range of reasonable alternatives including excluding logging within moist and cold upland forest types, only allowing non-commercial size thinning in RHCAs, no construction of “temporary” roads, all of which we probably suggested in our scoping comments, based on the scoping information and existing conditions we found in the field. These alternatives are still reasonable based on the EA analysis and existing conditions. (page 14)</p>	BMBP-1	NEPA/Silviculture	<p>See response to OW-9 in regards alternatives considered by the agency.</p> <p>See Patrick EA and associated silviculture report. Alternative 3 was developed in response to concerns raised during the public scoping process. This alternative provided a comparison of effects related to commercial and noncommercial treatments in RHCAs versus no silvicultural treatments in the RHCAs. The analysis of alternatives 2 and 3 provides a comparison of treatment versus no treatment specific to RHCAs to give insight to the potential effects to RHCAs under each alternative. It was determined that no treatment moves RHCA conditions further away from HRV and increases vulnerability to disturbance.</p> <p>Initial analysis of the project area determined that there was a need for treatment within RHCAs as well as moist and cold upland forest types. It was also determined through further analysis that no treatments in moist and cold upland forests as well as restricting treatment to noncommercial thinning in RHCAs would not meet the purpose and need for treatment due to the existing condition of vegetation. Therefore, these alternatives were eliminated from detailed study.</p> <p>Due to the location of forested areas in need of treatment, varied terrain conditions and the</p>

			<p>location of old road systems there was a need to identify potential temporary roads. Temporary roads are generally relatively short in length and are used to provide temporary access to treatment units, avoid sensitive areas or mitigate potential effects of vegetation management activities that would occur without a road in place.</p> <p>A high level of effort goes into identifying the need and proper location of temporary roads. The roads would be used to reduce the need for yarding, piling, or wood processing within RHCAs or other sensitive areas. Temporary roads also greatly reduce the length and extent of yarding corridors for ground based commercial harvest units. Rather than multiple long yarding corridors to move trees to a distant landing, one short temporary road is often utilized to eliminate a large portion of that disturbance. Skyline harvest units often require temporary roads in order to allow for proper landing location that minimizes the potential for erosion or soil impacts while allowing for efficient yarding operations.</p> <p>These roads are also designed to avoid the use of older existing road systems with poor road location or design. This includes old roads located at the bottom of draws or directly adjacent to streams.</p> <p>The elimination of temporary road construction would make both action alternatives non-implementable. The potential effects to soils, hydrology and aquatics would be increased due to inefficient logging and transportation design as well as increased management activity in RHCAs and steep slopes. Due to the potential increase in</p>
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			effects as well as the inability to meet the identified purpose and need, an alternative without temporary roads was eliminated from detailed study.
We agree that there is no sound ecological justification for logging large trees in this project area (or elsewhere). (page 14)	BMBP-2	Silviculture	The commentor does not define what they consider to be a “large tree”. Therefore, we cannot accurately address this concern. The Patrick project does not propose removing any trees that are 21 inches dbh or greater. The purpose and need for treatment is determined through analysis of existing vegetation conditions in comparison to desired conditions not a set diameter limit.
We remain convinced that no commercial logging and hardly any-if any non-commercial thinning should take place in RHCA’s. The science behind specific INFISH/PACFISH RHCA buffers remains solid..... (page 15)	BMBP-3	Silviculture, Hydrology	<p>Treatments within RHCAs were designed around meeting the identified purpose and need for these areas. The purpose and need is based on the existing vegetation condition within these RHCAs compared to desired conditions. All treatments within RHCAs were designed with specific mitigations or Project Design Criteria (PDC) to ensure protection of these areas. See Appendix B of EA for a list of these PDCs.</p> <p>RHCA buffers defined through INFISH and PACFISH were not intended to be no treatment buffers. They are an area of influence for the stream systems that they are associated with. These defined areas are afforded increased protection due to the sensitive nature of the aquatic species and habitats that may lie within the defined boundaries. Treatment within RHCAs would be in accordance with INFISH direction as stated below:</p> <p>Prohibit timber harvest, including fuelwood cutting, in Riparian Habitat Conservation Areas except as described below:</p>

			<p>Apply silviculture practices for RHCAs to acquire desired vegetation characteristics where needed to attain Riparian Management Objectives. Apply silvicultural practices in a manner that does not retard attainment of Riparian Management Objectives and that avoids adverse effects on inland native fish. See analysis in water resources, soils, aquatics and silviculture reports.</p> <p>The purpose and need identify a need 1) to increase landscape resiliency to risk of uncharacteristic disturbance within riparian forest types, 2) reduce threat of wildfire to local communities within the WUI and 3) increasing species diversity of vegetation towards deciduous riparian shrubs for wildlife habitat. The analysis shows that the proposed action will help move the riparian landscape towards better conditions for the indicators. We understand that you prefer the existing condition of dense forests that are not resilient to wildfire but are good for wildlife.</p> <p>See response to comments BMBP-30 and 31</p>
<p>The Forest Service is long overdue in establishing a smaller dbh logging limit for commercial thinning as the average dbh in stands planned for logging is now only 10-12" dbh. This means the FS is steadily increasing the density of small trees and remaining future replacement generations of mature trees would otherwise be next in line to replace large and old trees lost to past and ongoing over-logging and hazard tree removal. (page 15)</p>	BMBP-4	Silviculture	<p>The average diameter of a forest stand is one attribute of many that are considered when evaluating forest conditions and associated treatment needs. However, average diameter alone cannot be used to evaluate the overall stocking conditions or size distribution of trees in a stand.</p> <p>The average diameter of a stand can be greatly skewed in stands that have a high number of trees per acre in the lower size classes. This is often typical of areas transitioning into late successional conditions with a large amount of shade tolerant</p>

			<p>species moving into the understory. However, a highly or overstocked understory is not a direct indication that the stand is deficient within the larger size classes. High stocking levels within the smaller size classes of a stand often indicates a need to thin from below which would conversely shift the average diameter of the stand upwards. Elevated stocking in these smaller size classes is often a result of lack of fire or need for management in the absence of fire.</p> <p>Average stand diameter alone would not give an accurate measurement for forest succession, stocking levels or diameter distributions and would not be utilized to determine diameter limits of a silvicultural prescription.</p> <p>This is the reason that density measures such as basal area and stand density index are used to evaluate the actual stocking levels rather than average diameter. Stocking measurements in conjunction with a diameter distribution and species composition are utilized to understand stand conditions and develop effective silvicultural prescriptions.</p>
Powell 1999 is by now seriously outdated. (page 15)	BMBP-5	Silviculture	<p>This comment does not provide any citations or reasoning for the 1999 Powell Stocking guide cited in the EA and silviculture report for being outdated other than the date of publication.</p> <p>This document is peer reviewed and based on a wide berth of professional forest and silviculture science and literature. The stocking recommendations and associated science provided are still utilized extensively for management guidance of eastern Oregon and Washington</p>

			<p>forests.</p> <p>It is interesting that the commentor considers the 1995 INFISH/PACFISH document and associated science to be relevant, but not the 1999 Powell Stocking Guide.</p>
<p>Why does the Patrick EA refuse to disclose the actual UMZ and LMZ basal area retention targets planned? For any commercial thinning we ask for no less than a basal area range of 60 to 100 square feet of basal area per acre for the driest ponderosa pine stands with unlimited UMZ for old growth. The moist mixed conifer should not be commercially logged at all. (page 15)</p>	BMBP-6	Silviculture	<p>See Appendix B of silviculture report- page 79</p> <p>It is unclear how the stocking levels presented within this comment were derived or the science behind these recommended limits.</p> <p>Residual stocking levels for this project are based on many factors including plant association, stand and individual tree age, soil type, insects and disease as well as protection or enhancement of other resources such as riparian areas, seeps and springs, rock outcroppings and various wildlife habitats.</p> <p>Stocking levels will vary in accordance with the above factors creating variability across the project area.</p> <p>An unlimited upper end of management zone is unsustainable (Powell 1999). Managing stands at or above the UMZ would result in high mortality rates due to increased inter tree competition, elevated insects and disease and risk to wildfire.</p> <p>See comments GHCC-10, BMBP-9, and BMBP-40 for management within moist upland forest types.</p>
<p>There is no need to commercially log to control Dwarf mistletoe,...(page 16)</p>	BMBP-7	Silviculture	<p>The primary mechanism of seed dispersal for dwarf mistletoe within the same stand is through explosive discharge of created by water pressure.</p>

			<p>The discharged seeds are coated with a sticky substance allowing them to adhere to branches of new host trees or the same host tree starting a new area of infection (Hawksworth et al 1996). This manner of seed dispersal puts stands with multi canopy layers at a higher risk of spread due to the potential of infected overstory trees dispersing seed down onto uninfected trees below them. Forest stands that have not been maintained by fire typically have higher stocking levels within the understory and mid-story levels creating greater potential for spread of the disease.</p> <p>Due to this mechanism of spread pruning of infected branches on the lower portions of the tree crown would have little effect on the rate of infection and spread from mature trees with infection in the upper 2/3 of the crown.</p> <p>The comment stating that logging is known to spread mistletoe is a generalization and not applicable to the management prescriptions or objectives of this project. There are specific types of logging methods that have exhibited evidence of exacerbating the intensity of infection and ability of the disease to spread. Historic logging methods such as high grading or selective cutting in which the largest and best trees were selected for harvest resulted in a shift in species composition and a more multi-canopy structure leaving some species more vulnerable to mistletoe infection and spread (Hessburg et al 1999 and 2008).</p> <p>Harvest prescriptions designed around reduction of mistletoe have exhibited measured success</p>
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			<p>when implemented correctly (Schmitt and Hadfield 2009, Hessburg et al 2008, Schmitt 1996 and 1997).</p> <p>Project objectives and associated silvicultural prescriptions for this project would be designed to reduce existing infection levels, reduce the amount of multi-story stands and re-introduce fire where appropriate. These prescriptions are developed utilizing the best available science regarding management of dwarf mistletoe as well as professional experience managing similar stands and forest health conditions. Reduction of dwarf mistletoe would help to promote longevity and overall health of the effected species within the landscape being managed. Dwarf mistletoe will not be eliminated from these stands due to the strong ecological adaptations of this parasitic plant. Therefore, the benefits provided to wildlife will still be present at a reduced, more endemic scale. Management of the disease is designed to reduce infection levels to more closely resemble endemic or pre-fire suppression conditions. In the pre fire suppression era wildfires likely had a maintenance effect on infection levels by reducing affected trees and individual branches through increased torching (due to the increased ladder fuels in the form of witches' brooms created as a symptom of the disease). Fire also had a greater indirect effect in this era by developing a more simplified forest structure and increasing individual tree spacing (Hessburg et al 2008).</p>
Juniper with old growth characteristics should not be removed by logging or otherwise whenever they occur. (page 16)	BMBP-8	Silviculture	This project does not propose the removal of old growth juniper. Juniper would be removed from areas that are classified as true conifer stands or

			<p>habitat. Western juniper has historically occurred in areas that do not have frequent fires (rocky ridges, areas with shallow soils and very low fuel levels or continuity). However, in the absence of fire this species will begin to encroach into conifer stands having adverse effects on the overall conditions of these forested areas. Western junipers can have a life span of over 1000 years (Miller et al 2005). Juniper encroachment resulting from fire suppression is a relatively recent occurrence. The juniper trees that would be targeted for removal in these conifer stands would not be considered old growth trees for this species. See silviculture report for more detail.</p>
<p>Drop all commercial logging within moist and cold forest type, old forest multi strata as these sites would naturally have higher tree density and are admitted in the EA to currently have lower tree density. Restrict any thinning in dry stand old growth to 12” dbh with limited exception of 12-14” dbh for ladder fuels directly under the single dripline of old growth ponderosa pine. Elevated tree density in the MA15 is likely mostly only 9-12” dbh. (page 16)</p>	BMBP-9	Silviculture	<p>Density levels in the cold upland and moist upland forest types are currently slightly below HRV as a result of past insect and disease outbreaks coupled with historic management activities which removed a portion of the larger, early seral overstory trees.</p> <p>However, the need for thinning treatments in these forest types is based on the departure from HRV in species composition and structure stage not densities. The current conditions within these stands includes an abundance of late and mid seral, shade tolerant species and multi-story canopy structures.</p> <p>These conditions greatly increase the landscapes susceptibility to large scale, uncharacteristic disturbance. Multi storied stands and an abundance of late seral species increase susceptibility to defoliating insects such as spruce budworm and Douglas-fir tussock moth. The spread of dwarf mistletoe is enhanced by multi</p>

			<p>storied stands reducing the vigor of individual trees. Increased mortality levels and associated increases in fuel loading all contribute to an increased susceptibility to high intensity, large scale wildfire.</p> <p>Treatments would be designed to move these two attributes toward HRV to increase overall resiliency to disturbance. Density levels in these two forest types would temporarily move away from HRV due to current stocking levels and thinning the less desirable species to shift species composition and structure stage toward HRV. However, this reduction in density would be temporary. The increase in overall forest health and vigor resulting from treatment would result in an increase in stand development and growth rates. This would put these forest types on a trajectory to move toward HRV across all three forest attributes (species composition, density, stand structure) over time.</p> <p>Old forest multi strata did not have low densities across the project area as stated in this comment (see silviculture report and silviculture section of EA).</p> <p>Restricting harvest to 12” dbh in old forest structure or 12”-14” for ladder fuels would not meet the purpose and need for treatment within these stands due to the current stocking conditions in the overstory. Although this would remove a portion of the understory fuels it would not reduce stocking levels enough to effect species composition, stand structure or have a measurable effect to growth rates, tree vigor and overall stand health.</p>
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			<p>Stocking within the MA-15 stands is variable across the project area. However, a large portion of these stands exhibited elevated stocking levels throughout the understory and overstorey. Treatments within these stands will only consist of prescribed burning or non-commercial thinning of the smaller diameter trees (10" dbh and less).</p> <p>Also see response to comments BMBP-40 and GHCC-10</p>
Commercial logging tends to increase insect outbreaks, disease, tree stress and wildfire intensity, not reduce these. We are opposed to conversion of OFMS to OFSS except for reducing dry ponderosa pine dominant forest stand density by noncommercial thinning up to 9" dbh....(page 16)	BMBP-10	Silviculture	<p>The statement that commercial logging tends to increase insect outbreaks, disease, tree stress and wildfire intensity, not reduce these is a generalization of logging methods and potential effects. This comment does not list any credible science or research to give specific examples or verify this statement. This is considered an opinion issued from the commentor.</p> <p>There are attributes of logging or thinning operations that can temporally increase risk to insects and disease or wildfire if not mitigated. However, these factors are taken into careful consideration during our analysis and implementation phases of a project. See Appendix B of the EA for mitigations in the form of project design features.</p> <p>The benefits of increasing forest health and resiliency to disturbance far out way these temporary risk factors that can be mitigated for. Also see silviculture and fuels report for more specifics on the benefits of forest health and fuels treatments as well as professional citations.</p>
We are opposed to more logging in wildlife	BMBP-11	Wildlife, Silviculture	See EA at 122-123 for discussion on connectivity

connectivity corridors due to effect of climate change. (page 17)			<p>corridors. Treatments within connectivity corridors would increase tree growth to accelerate the development of old growth.</p> <p>This comment fails to link the effects of thinning within connectivity corridors to climate change. Thinning would increase the growth and vigor of these stands.</p>
It is not acceptable to us to manage to or near the lower management zone, as this equates to incremental deforestation with no significant midstory of younger trees.....(page 17)	BMBP-12	Silviculture	<p>This appears to be a misunderstanding of the what the lower end of the management zone (LMZ) represents. The optimum stocking level for a given site is referred to as the management zone. When stocking levels fall within this zone the stand is generally presumed to be resistant to insect and disease and overall stand growth is maximized (Powell, 1999). The lower end of the management zone is simply the stocking level at which the stand has moved into full site occupancy and overall stand growth is maximized. As stand densities grow beyond the upper limit of the management zone (UMZ) trees begin to aggressively compete for scarce site resources and competition induced mortality begins. These increased mortality and stress levels also increase the risk of insect attack.</p> <p>Thinning to the lower end of the management zone does not constitute deforestation. These stands would be fully occupied post treatment. Stands that fall below the LMZ are considered to be understocked because not all of the site resources are being utilized for tree growth. The LMZ is used as management threshold in order to maximize stand health and growth while allowing time and space for the stand to continue growing before it reaches the UMZ.</p>

We are opposed to group selection being used to create gaps in the overstory or largest tree size class in the stand. All this group selection gap size planning at twice 120ft tree height....not based on ecological science....(page 17)	BMBP-13	Silviculture	See response to comment OW-2, OW3
Any created openings should only be up to 1-2 acres at the most, only representing removal of small trees in what would be otherwise be natural openings as many openings have already been created through past logging. (page 17)	BMBP-14	Silviculture	See response to comment OW-2, OW3
We support creating variability through thinning in even age, over planted plantations, but only up to 15" dbh max for thinning and usually this increased variability would result from only non-commercial thinning only up to 9-12" dbh max due to the effects of past logging.(page 17)	BMBP-15	Silviculture	Silvicultural prescriptions are based on the existing conditions of each stand which are variable throughout the project area. An arbitrary diameter limit would not be appropriate for addressing all the various existing conditions and associated treatment objectives. See silviculture report for more details.
Lodgepole pine stand mortality via mountain pine beetle is not a "threat" but a natural disturbance creating new habitat niches for species that evolved with lodgepole pine, such as.....Instead create openings around western larch by posts and pole thinning ... (page 18)	BMBP-16	Silviculture	The analysis within the EA and associated resource reports does not consider lodgepole pine mortality to be a threat. The analysis evaluates the level of susceptibility to insects and disease such as mountain pine beetle. The current level of susceptibility is departed from HRV within this forest type and mountain pine beetle populations are at outbreak levels within portions of these lodgepole pine stands (USDA Forest Service; Spiegel, L.H. 2018). The action alternatives are designed to increase variability within age classes, patch sizes and species composition in order to increase resiliency to mountain pine beetle as well as other disturbance types.
We are opposed to defensible fuel profile zones as large as 300 feet from each side of	BMBP-17	Fire/Fuels	Defensible Fuel Profile Zones are strategically placed treatments along identified roads where

the roads. DFPZs could be created w/just NCT and prescribed fire.(page 18)			tree densities, canopy base heights, surface fuel loadings and ladder fuels are reduced, in order to modify fire behavior and provide a safe place for firefighters to initiate fire suppression activities. DPFZ's provide a location that a wildfire would not be able to carry through the overstory canopy and would have limited ladder fuels to initiate crown fires. The width of the DPFZ will vary dependent on terrain and fuel type with maximum width of 300 feet from either side of the road it is established on. (Page 18 of EA) The maximum 300 feet will generally only be used when terrain and fuel loadings show that it is needed. The 300 feet helps reduce spotting distance across the DPFZ.
We are generally supportive of the aspen restoration as planned with the exception of being weary of thinning of overstory aspen in the aspen maintenance enclosures as prescribed burning should be enough to stimulate more aspen sprouting without jeopardizing the viability of too many live aspen through overstory thinning (a strange concept for aspen) plus prescribed burning. (page 19)	BMBP-18	Silviculture	Thank you for your support of these treatments. The potential need to treat overstory aspen to induce sprouting of aspen seedlings is based on the tree physiology of this species. Sprouting is controlled through hormonal responses in the root system that is directly tied to the health of the overstory trees. See Silviculture report page 61-62 for more details.
Drop landscape prescribed fire in moist mixed conifer exclusions and lodgepole pine cold forest, as burning in moist.....(page 19)	BMBP-19	Silviculture & Fire/Fuels	Fire intensities would be kept low during implementation to minimize fire and fire effects in the overstory canopy. (Page 19 of EA) Generally prescribed burning is avoided in dominant lodgepole stands to avoid stimulating growth of lodgepole seedlings.
Don't use aerial ignition as that increases the risk of torching overstory crowns. (page 20)	BMBP-20	Fire/Fuels	Fire intensities would be kept low during implementation to minimize fire and fire effects in the overstory canopy. Fire intensities would burn mainly through the surface fuels throughout the majority of the prescribed fire units. Individual or

			small group torching may occur in areas where there are sufficient ladder fuels, and in timber stands with high occurrences of mistletoe infected trees. (Page 19 of EA)
Avoid large landings and grapple piles so as not to sterilize the soil through intense burning. (page 21)	BMBP-21	Fire/Fuels, Soils	Effects to soils from pile burning was analyzed in detail within the soils report. Landing piles that could create a considerable area of bare soil would be replanted using seed from approved sources. (Page 21 of EA)
There are way too many open roads on the Forest already to provide for elk security, recreational solitude, and undisturbed wildlife habitat. Reopening 154 miles of administratively closed roads and constructing 38.5 miles of so-called temporary roads is literally overkill and unnecessary to meet the purpose and need at the scale. We strongly oppose any new road construction including temporary roads. (page 22)	BMBP-22	Transportation, Silviculture	Temporary road construction was proposed at the minimum level to meet management objectives for the project purpose and needs. Post-harvest storage of the temporary roads was proposed so as to not increase the existing open road densities.
Removal of 85.4 million board feet of sawlogs is very excessive for this mostly already logged area. (page 22)	BMBP-23	Silviculture	This project includes approximately 23,470 acres of proposed commercial harvest. Typically, a light thinning from below treatment produces approximately 2000 board feet of merchantable timber per acre. This level of removal is typically the threshold that is used for a harvest unit to be economically feasible when using ground based logging systems on the Wallowa Whitman National Forest. The estimated total removal of 85.4 million board feet across the entire project area is an average of 3.6 thousand board feet per acre of removal. This accounts for the various levels of existing stocking across the project area as well as environmental conditions that drive treatment need, associated prescriptions and appropriate stocking levels. The stands identified

			for treatment would remain fully stocked after treatment.
The scale and intensity of commercial logging for the Patrick Sale needs to be greatly reduced to allow for other multiple uses of the Forest, including wildlife habitat diversity, future mature and large tree structure, carbon sequestration to reduce the effects of climate change, recreational values, snag and log recruitment and soil nutrient cycling. (page 22)	BMBP-24	Silviculture, Wildlife,	<p>Thank you for your comment. The Patrick Vegetation Management project was designed to improve overall vegetation conditions and consequently the associated attributes listed in this comment. Commercial timber harvest is just one tool used in this project to improve overall conditions and allow for continued multiple uses in conjunction with increased forest health and sustainability. Non-commercial thinning, prescribed fire, road closures and aspen restoration are also proposed activities.</p> <p>Commercial harvest would be used to improve overall vegetation conditions. Reducing the scale or use of this tool would be contrary to the objectives listed in this comment and would not meet the purpose and need.</p>
Berms and barricades for closing roads to public use are typically ineffective and easily violated, as are post and pole wooden gates. The Forest Service needs to stop re-opening so many closed roads, including those closed to meet Forest Plan road density standards and to use only effective metal gates with locks for road closures.	BMBP-25	Transportation	Thank you for your comment.
So-called “temporary” roads are rarely fully or effectively blocked and are often reused by the Forest Service creating de facto system roads as well as increasing access for invasive plant introduction and dispersal, ATVs, livestock, illegal firewood cutting and fur trapping.(page 23)	BMBP-26	Silviculture / Transportation	Temporary roads would be fully rehabilitated after implementation as part of this project. See PDCs in Appendix B of EA and soils report for mitigations and effects.
The forest already has far too many miles of roads to be properly maintained. (page 23)	BMBP-27	Transportation	Thank you for your comment.

We support more road closures and decommissioning such as the paltry 7.86 miles proposed in Table 4, but not at the expense to wildlife and the ecosystem of so much re-opening of closed roads and any temporary road construction. It doesn't increase our level of trust in the agency that past promised and approved road closures were never implemented (page 25).	BMBP-28	Transportation	Thank you for your comment.
NCTing is all that would be needed to release riparian hardwoods. Prescribed burning would also stimulate hardwood sprouting. Commercial logging in RHCAs is not necessary or desirable.(page 29)	BMBP-30	Silviculture, Fuels	Non-commercial thinning and prescribed burning are both effective tools for managing vegetation within RHCAs. However due to the existing stocking levels within the overstory of identified RHCAs, these treatments would not be effective in moving stands toward desired conditions. See response to comment BMBP-3 and 31
Drop all commercial logging and heavy equipment within RHCAs. (page 29)	BMBP-31	Hydrology, Aquatics	Thank you for your comment. We don't believe that we could meet the purpose and need without commercially thinning RHCAs and using heavy equipment. Aquatic Staff are using heavy equipment to restore riparian management objectives in their streams since the early 1990s without having detrimental impacts. The mere presence of a RHCA doesn't mean that it's sensitive to heavy equipment if used properly with best management practices. See response to comment BMBP-3 and 30
We are strongly opposed to commercial logging in RHCAs and will do everything we can to legally stop this. Logging within RHCA is contrary to decades of best available science and would threaten the viability of sensitive fish species and other sensitive aquatic species such a Columbia	BMBP-32	Silviculture	The commentor does not provide the science they are referencing so we cannot accurately consider or respond to this comment. See response to comment BC-4, OW-4, GHCC-1, and BMBP-3, BMBP-30, and BMBP-31

Spotted frog and would violate rather than further attainment of Riparian Management Objectives under INFISH. (page 29)			
This would be an outrageous violation of the Eastside screens and its very defensible and credible science supporting the RHCA buffers to do so much commercial logging within the RHCAs-481 acres of RHCA destruction! Both ground based and skyline logging would foreseeably cause extensive negative impacts to soils, sediment of streams shading, moisture retention and future recruitment time of large wood, based on decades of past damages from logging in RHCAs. (page 29)	BMBP-33	Silviculture	This is not a violation of the Eastside Screens. See response to comment BMBP 3.
Riparian areas and aquatic species evolved with wildfire but not with logging and heavy equipment. Generally the density in riparian areas is not likely to be greater than 9-10" dbh, so non commercial thinning by hand leaving all felled trees within the RHCA should be sufficient. (page 29)	BMBP-34	Silviculture, Hydrology	We agree with the statement that the riparian systems evolved with wildfire. It is the absence of wildfire over the past 100 plus years that has greatly contributed to the departure of these systems from desired conditions. The existing condition within these riparian and upland areas was used to determine the purpose and need for treatment. Also see response to comment BMBP 30.
Not commercially logging within RHCAs would also prevent the additional negative impacts of lighting larger hand & machine piles within the RHCAs and even further increasing fine sediment introduction into streams. There should be no heavy equipment use within the RHCAs, including machine piling as this would further violate RMOs. (page 30)	BMBP-35	Hydrology, Aquatics	The Whitman RD has utilized heavy equipment use in RHCAs for efficiently piling fuels and has not negatively impacted water quality. WQ-2 PDC in Appendix B has a 50 foot buffer on all stream channels for machine piling. This buffer will provide for a zone with high ground cover to function like an infiltration gallery and reduce the likelihood that the use of machine piling will connect sediment to the adjacent waterbody and violate a RMO. Soil Quality PDCs are also present that have timing, watch-out situations, and requires effective ground cover to minimize any

			<p>sedimentation from leaving the unit and violating RMOs or state water quality standards.</p> <p>See response to comments BC-4, OW-4, GHCC-1, and BMBP-3, BMBP-30, and BMBP-31</p>
<p>This RHCA management planning is so backwards. Why commercially log RHCAs due to assumed excessive tree density only to plant more trees after logging? (page 30)</p>	BMBP-36	Silviculture	<p>Reforestation/planting is not part of the proposed action of this project. The need to treat within RHCAs is based on species composition, tree densities and structural stages that are departed from HRV. In addition, treatments would be designed to promote healthy stream systems through promoting hardwood species and recruitment of down woody debris.</p>
<p>Logging within RHCAs does not improve forest ecological health resiliency to disturbance or increase structural complexity and species diversity of forest plants providing a wider range of wildlife species but has the opposite effects contrary to the purpose and need stated for the Patrick timber sale project. Logging commercially in RHCAs would also be very unlikely to significantly reduce fire risk to the large non-existent “urban” interface. Also the riparian restoration costs outweigh any short term economic benefits to the timber industry. (page 30)</p>	BMBP-37	Silviculture	<p>Treatments within RHCAs were not based on economic benefit. They were based on the need for restorative treatments due to the existing conditions. See silviculture and fuels report for more details. Also see response to comments BC-4, OW-4, GHCC-1, and BMBP-3, BMBP-30 through 36</p>
<p>There is Not a full range of alternatives offered in the EA as can be seen by the overwhelming similarities in acreage managed same types of logging and other management as can be seen in Table 11, except for the limited differences from Alt.3 not commercially logging the RHCAs. There should have been alternatives that(page 31)</p>	BMBP-38	NEPA	<p>See Response to Comment OW-9.</p>

<p>The EA has grossly inadequate cumulative effects analysis, which is mostly confined to only an appendix table listing present and foreseeable future impacts and subsumes all the past impacts into the present condition thus avoiding detailed cumulative impacts analysis of the combination of past land often still existing impacts of past management with all the management impacts now proposed for the Patrick Sale to wildlife, soils, carbon sequestration aquatic species, water quality, riparian condition, recreational values, indigenous peoples cultural sites and uses, and to the ecological process, biodiversity and forest resilience. (page 34)</p>	<p>BMBP-39</p>	<p>NEPA</p>	<p>Current environmental conditions provide an adequate proxy for the impacts of past actions. This is supported by CEQ guidance in their June 24, 2005 memorandum in which they stated: “Agencies are not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined. Agencies retain substantial discretion as to the extent of such inquiry and the appropriate level of explanation. Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 376-77 (1989). Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.</p>
<p>Given that moist and cold forest types only encompass 21% of the project area, we ask that commercial logging be dropped in these forest types to support species-including MIS pileated woodpecker, American marten and rocky mountain elk-who evolved with and are dependent on denser, more complex forest structure represented in these forest types. Further the EA admits that tree density is already lower in these forest types due to past logging and other management even though these forest types would naturally be more productive with denser forest. (page 35)</p>	<p>BMBP-40</p>	<p>Silviculture / Wildlife</p>	<p>The need for treatment is not based on the proportion of each forest type within the project area. The need for treatment is based on the current condition of vegetation within each forest type. See silviculture report for more details.</p> <p>Also see response to comments GHCC-10 and BMBP-9</p>
<p>The Patrick EA does not define acronyms such as DUF, MUF, and(page 37)</p>	<p>BMBP-41</p>	<p>Silviculture, NEPA</p>	<p>See silviculture report page13 and EA page 34.</p>
<p>Why are there no year of study citations for authors cited on EA p. 37, 2nd to last</p>	<p>BMBP-42</p>	<p>Silviculture</p>	<p>The year of the study citations have been corrected and are in the final EA. All citations can</p>

paragraph? Page37)			be found in Appendix D of the EA.
Why are repeated commercial logging activities now expected to have a different result from past logging regarding increasing wildfire suppressions increasing fire intensity, and stimulating denser in-growth of small flammable trees? This calls into question the assumed consistency of proposed actions with the stated purpose and need for the project in general, commercial logging decreases individual tree health and vigor and forest resiliency to fire, insects and disease. (page 37)	BMBP-43	Silviculture	Wildfire suppression and commercial logging are two distinctly different activities with different effects to forest vegetation. The action alternatives for this project are designed to increase resiliency to wildfire. See the analysis within the EA and fuels report for a comparison of wildfire risk across the no action and action alternatives.
How recently has the Patrick project area been logged with what kind of logging? What kinds of past logging overlap current sale limits? (page 38)	BMBP-44	Silviculture	See silviculture report page 17 thru 18.
The EA should be disclosing and analyzing the cumulative effects of past management to wildlife habitat, soil integrity, and many other forest values,(page 38)	BMBP-45	All	See Appendix A Cumulative Effects Analysis
Not all multistrata old forest represents small tree or fir “encroachment”. The EA should have clearly distinguished moist mixed conifer forest from hot/dry Ponderosa pine-dominant forest in the analysis and in Table 13 on EA pg 39. Moist mixed conifer forest is more productive than dry forest due to higher moisture levels and retention, resulting in natural higher tree density. Multiple wildlife species, including MIS, evolved with and need denser forest. (page 38)	BMBP-46	Silviculture	<p>The EA or silviculture report does not state that all Old Forest Multi Strata stands are incurring small tree or grand fir encroachment. Table 13 simply displays the amount of this structure stage across this landscape relative to HRV. The analysis of structure stage, species composition and tree density is clearly delineated between cold upland, dry upland and moist upland forest types within the HRV analysis portions of the EA and silviculture report.</p> <p>The variation in forest characteristics that are expected across these forest types are captured within each associated range of variation. For example, HRV levels for tree density is greater</p>

			within cold and moist upland forests than they are for Dry upland forests due to the different environmental conditions in which these forest types occur.
I have no access to the Silviculture report. The EA should be disclosing and analyzing the cumulative effects of past management to wildlife habitat, soil integrity, and many other forest values including water quality, fundamental ecological functions and recreational values. This is inadequate analysis in the EA! (page 38)	BMBP-47	NEPA	Appendix A of the EA displays the Cumulative effects analysis for the Patrick project. Please see Cumulative effects section of the silviculture report within the EA on pages 47-62. Also, each resource report within the EA has a cumulative effects section.
Drop all moist mixed conifer cold dry stands from commercial logging since 78% of the sale area is dry which is the most...(page 41)	BMBP-48	Silviculture	See response to comments GHCC-10, BMBP-9, BMBP-40
How accurate is LIDAR and aerial photo interpretation for determining actual canopy closure on the ground? (page 41)	BMBP-49	Silviculture	<p>The commentor is speaking to canopy closure. The analysis utilized canopy cover. Canopy closure and canopy cover are distinctly different metrics measured through different methods.</p> <p>LiDAR-derived canopy cover is generally regarded as the MOST ACCURATE canopy cover measurement due to its spatial awareness & much higher density. (USFS Region 6 Biometrics program, April 2020)</p> <p>The Region 6 biometrics program conducted a study in 2017 directly comparing both canopy cover and canopy closure measurements on the ground vs. measured from airborne lidar or modeled using the Forest Vegetation Simulator (FVS). This study confirmed that lidar canopy cover is highly correlated with ground-based measurements and has several advantages (Bryant and Rathbun 2017).</p>

			<p>Aerial photo interpretation to estimate canopy cover is a method that has been utilized for decades. The 1% of the project area where lidar-based canopy cover measurement was not available, aerial photo interpretation was the most efficient and reasonable method to use. There may be some small systematic difference between the lidar-measured areas and the aerial photo interpretation, but because this less intensive method was required on such a small percentage of the project area there would be no measurable effects to the overall analysis. Compared to other options for filling in this data gap (ground based ocular or direct measurement, FVS modeling), aerial photo interpretation can be applied more consistently across the identified area.</p>
<p>Using the seral species concept is a disingenuous way to obscure the natural role of the forest successional stages. Not all of the forest would historically have been Ponderosa pine or western larch dominant as these are microclimate and elevation difference from highly varied topography that can be conducive to natural grand fir or douglas fir climax condition.... (page 43)</p>	BMBP-50	Silviculture	<p>There is no project goal or objective to move all forest stands within the project area to a ponderosa pine or western larch dominated condition. Treatments would be designed to move species composition toward HRV.</p>
<p>Grand fir in appropriate sites will also form stable long term large tree dominated stands, Old forest structure but the EA sidesteps admitting this. (page 43)</p>	BMBP-51	Silviculture	<p>There is no proposal to remove all grand fir. The premise of managing by plant association, potential vegetation group and within a range of variation is based on promoting and sustaining the appropriate species composition for each site across the landscape. Grand fir would make up a proportion of that species composition. However, HRV analysis currently indicates that late seral species such as grand fir are in abundance across</p>

			the project area. Proposed treatments would be designed to move species composition toward HRV for the associated forest type or potential vegetation group. See silviculture report for more details.
Given the past logging practices the changes in the Patrick area are most likely due to overstory removal some moister decades encouraging fir in-growth and overgrazing by livestock not just to fire suppression which is obvious from the fire starts nearby and prescribed burning having been done in the area. The EA is failing to analyze these cumulative effects and thereby analyze potential negative effects of repeating much of the same pattern of management. (page 44)	BMBP-52	Silviculture	Appendix A of the EA displays the Cumulative effects analysis for the Patrick project. Also see response to comment BMBP-47.
The FS is also neglecting to disclose their past removal of most of the mature and large ponderosa pine and larch in the area as well as likely logging out of large fir. (page 44)	BMBP-53	Silviculture	An analysis of current conditions was used as a proxy to evaluate past actions. These current conditions were evaluated to determine the purpose and need for the project as well as develop appropriate action alternatives.
The EA carefully avoids disclosing whether these insects and diseases are at endemic or epidemic levels. What does elevated pine beetle fir engraver mean? (page 44)	BMBP-54	Silviculture	The term elevated with respect to insects or disease levels within the Patrick project area is in reference to reports generated by the Blue Mountains Forest Insect and Disease Center describing their findings during multiple field visits to the project. The term elevated associated with the various identified forest insects mentioned in the EA, silviculture and insect and disease reports describe levels that are above what would be considered background levels and are high enough to drive management decisions. Elevated bark beetle populations generally equate to forest stand

			<p>conditions that are unsustainable. Elevated pine engraver and fir engraver populations mean that populations are at a level high enough that trees can no longer fight off attacks and the effected sites can no longer support the trees that are under attack.</p> <p>When these populations are not elevated the stands may exhibit occasional successful attacks indicating poor health of individual trees. In contrast stand level mortality can begin to happen when conditions such as high densities and prolonged drought occur and stands incur increased stress as trees compete for limited resources.</p>
How can the Forest Service possibly know the historic range of variability for Douglas Fir Engraver beetles?...(page 45)	BMBP-55	Silviculture	The analysis is not considering a historic level of insect populations or occurrence. The analysis is evaluating a range of variation for susceptibility to insects and disease based on forest conditions compared to current susceptibility levels.
The presence of dwarf mistletoe often results in spread from past logging. Why would planned logging have a different outcome? (page 45)	BMBP-56	Silviculture	See response to comment BMBP-7
The large percentage in moderate susceptibility across the majority of bark beetle hosts (trees) does not necessarily mean that high susceptibility is inevitable or that commercial logging is necessary for reducing tree density or bark beetle future infestations. (page 45)	BMBP-57	Silviculture	The level of moderate susceptibility was used to assess the current conditions of forest vegetation relative to the risk of large-scale disturbances. See page 25 through 34 of silviculture report.
This discussion suggests that pruning lower mistletoe infected branches and prescribed burning could be effectively used to reduce mistletoe without commercial logging (see	BMBP-58	Silviculture	See response to comment BMBP-7

EA page 45 paragraph 6)			
<p>The EA reads as if the site for logging was predetermined before any analysis was done (which is usually the case) and then the analysis task is to somehow come up with rationales for pre-determined management plans-a business usual timber sale. The rationals for treating Douglas Fir& Western Larch for mistletoe is exceedingly strained (see p.45 last paragraph) and just an excuse to log those species.</p>	BMBP-59	Silviculture	<p>Once again commercial harvest/thinning is only one of the tools that would be used to implement the proposed actions for this project. The continued perception that the proposed activities for this project are merely a vehicle to increase logging activities is unfortunate.</p> <p>This project area was rigorously evaluated over multiple years to determine the existing state of forest vegetation. The initial purpose and need pertaining to forest vegetation was developed from these field evaluations and then presented to a comprehensive interdisciplinary team for further study and analysis. The final purpose and need as well as project alternatives were developed through this comprehensive interdisciplinary process.</p> <p>See page 11 and 12 of the silviculture report for discussions on the evaluation and data collection process pertaining to forest vegetation. Also see response to comment BMBP-7 and silviculture report for further discussion of dwarf mistletoe.</p>
<p>The discussion of effects to mgmt. of old forest structure and old forest preservation stands weak, it clear that the Forest service wants to homogenize the forest not diversity it contrary to the stated purpose and need. (page 48)</p>	BMBP-60	Silviculture	<p>There is no goal to homogenize the forest within this landscape. Forest stands that are departed from HRV are typically decreasing in diversity as early seral species are reduced due to their limited ability to compete with later seral shade tolerant species in a landscape lacking natural wildfire. Lack of wildfire or forest management generally decreases diversity in stand structure as multi story structures increase well above HRV and single story structure stages are greatly reduced or absent (Old Forest Single Story in This Project). This results in reduced diversity of forest structure</p>

			across the landscape and is evident within the HRV analysis. See HRV analysis within the silviculture report and EA.
The very limited consideration of potential effects of climate change fails to acknowledge the urgent necessity of retaining as much carbon storage and sequestration in the forest as possible, which means not logging and remains mature and large forest cover or large snags and logs. (page 48)	BMBP-61	Silviculture	See cumulative effects section of silviculture report for analysis of climate change.
The climate change analysis apparently is not prioritized enough to even warrant a separate section of detailed analysis..(page 48)	BMBP-62	Silviculture	Climate change is analyzed in the cumulative effects section of the silviculture report and EA. Climate is an abiotic factor that continually effects the overall conditions of a forested ecosystem. Climate trends effect forest health in concert with many other factors such as soils, elevation, species diversity, aspect and disturbance processes. Climate also has a great influence on each of these contributing factors. Although climate trends do produce direct and indirect effects within the distinct boundaries of the project area it is considered a cumulative effect because of the infinite spatial and temporal scale of influence.
The forest service staff still don't seem to recognize the positive and necessary role of wildfire in the ecosystem and instead do their best to lump all wildland area into the WUI in order to suppress fire. Wildfires should be allowed to burn in the back country. (page 49)	BMBP-63	Fuels	Thank you for comment.
There is no evidence presented that logging would accelerate the diameter growth, nor any commitment made that mature trees would be allowed to become large without	BMBP-64	Silviculture	Residual stocking levels and the science behind increasing individual tree as well as stand growth through thinning is well documented in the EA and silviculture report. There is a vast amount of

being logged & removed. Just noncommercial thinning and burning in the dry OFMS stands would be enough to reduce significant inter-tree competition while keeping the mature tree community and mycelia connections intact, increasing stand resiliency.....(page 49)			science cited within the silviculture report that supports the theory that stocking levels and thinning can have major positive effects to stand vigor, resiliency and growth rates.
Don't use prescribed burning in moist mixed conifer MA-15 old growth stands as this would degrade pileated woodpecker habitat....(page 50)	BMBP-65	Wildlife/Fuels	Please see Wildlife Environmental Consequences section pages 111-113.
Commercial logging does not constitute restoring the forest. (page 50)	BMBP-66	Silviculture	We have not stated that commercial logging constitutes forest restoration. Commercial logging is one tool that is utilized to meet objectives of forest restoration and move conditions toward HRV.
A theoretical HRV conformance goal ignores a recent Pacific NW research Center, refuting the idea that management should try to mimic a static point arrange in time. (page 50)	BMBP-67	Silviculture	See response to BMBP-70, 74 and BC-2.
Just NCTing and prescribed burning would also reduce most inter-tree competition and stress and achieve reducing the spread of insect defoliation and increased tree vigor and resiliency to insect outbreaks. (page 50)	BMBP-68	Silviculture	See silviculture report. Non-commercial thinning and prescribed burning is effective at reducing inter-tree competition and fuels within the understory (trees 10-inch DBH and less). However, these treatments are not effective for reducing stocking in the overstory, improving species composition, or enhancing forest structure. The condition of the forest overstory can have a major effect on the rate of spread, level of infestation/infection for many different insect and disease vectors such as dwarf mistletoe, spruce budworm, Douglas-fir beetle and mountain pine beetle. Thinning only the understory within stands that

			have over stocked overstorys or unfavorable species composition and stand structure would not be effective in properly addressing the existing issue and conditions in order to increase health and resiliency of the stand.
The analysis for MA15 stands finds that most forest service objectives would be met just NCTing and prescribed burning alone. This is true for the old growth most mature stands outside designated old growth. (page 50)	BMBP-69	Silviculture	Thank you for your comment. Non-commercial thinning (NCT) and prescribed burning are the only treatments proposed within MA-15 stands.
What is the year for the HRV baseline, the type of data on which it was based and the exact geographical...(page 51)	BMBP-70	Silviculture	<p>Also see response to BC-2 and BMBP 74. HRV is not based on a specific year or date. HRV is an estimated range of conditions that are believed to have occurred under historic disturbance regimes.</p> <p>Historic or natural Range of variation analysis is based on disturbance process modeling utilizing the Vegetation Dynamics Development Tool (VDDT). This modeling program was developed by a cadre of multiple ecological scientists in order to evaluate the effects of disturbance regimes over time and develop a range of variation for forest conditions based on those effects. The disturbance regimes are based on the best available science describing the function of pre-settlement disturbance processes. Although the disturbance regimes are based on pre-settlement conditions, the model itself is not based on a static timeframe and is not meant to represent a specific “snapshot” in time. The model is designed to simulate the long time periods (centuries) that are necessary to develop a range of variation in forest conditions that would be expected to occur, given the various natural disturbance types, sizes and frequency. This range</p>

			<p>of variation is then used to provide an ecological basis for comparison to current conditions to assist in determining the current forest health and associated resiliency to disturbance. The main idea is that if landscapes are restored to and maintained within this natural range of variation, then this represents our best chance to maintain ecological integrity and sustainability over time. This modeling was conducted at the forest-wide scale and is the source of the HRV values presented in the 2012 Powell and 2011 Countryman documents that were used for the HRV analysis in the Patrick project.</p>
What are the science studies that would support the direct and indirect effect conclusions for specie composition...(page 51)	BMBP-71	Silviculture	See Works Cited section of the silviculture report page 68.
It is highly misleading and speculative and likely inaccurate to be presented data that estimates effects approximately 20 to 30 years after implementation...(page 51 and 52)	BMBP-72	Silviculture	<p>The Forest Vegetation Simulation (FVS) model was utilized to compare alternatives and estimate potential effects of proposed treatments over time versus no treatment. This program has been widely used and accepted within the natural resources management profession as a high level modeling program for estimating forest growth as well as the effects of treatments, insects and disease, competition induced mortality and various other factors.</p> <p>Many forest attributes such as structure stage, particularly old forest structure is not a metric that can be altered immediately through silvicultural treatments. Treatments are designed to put forest stands on a trajectory to move toward HRV over time. The FVS program was utilized to model these stand characteristics through time after treatment in order to assist in predicting the</p>

			effects of treatment on future structure stages and other forest attributes. This allows the comparison of alternatives and the effectiveness of associated treatments in meeting the purpose and need.
Table 22 makes little sense-how would alternative 2 & 3 increase OFMS from 15% (alt 1)....(page 52)	BMBP-73	Silviculture	See detailed methodology in Appendix C of silviculture report. One of the objectives of treatment would be to move stands toward old growth conditions over time. If the treatments did not show an increase in old forest structure, they would not be effective at meeting that objective and would be re-evaluated. For example, forest stands that are proposed for thinning and currently classified as understory re-initiation would be moved toward old growth conditions. Reducing stocking levels within these stands would shift available site resources toward the remaining larger, early seral trees. This would increase growth rates of the residual stand and move them toward old forest conditions more rapidly than if they were left untreated.
What is actual data sources for HRV determination...(page 52)	BMBP-74	Silviculture	<p>HRV levels for stand structure were derived from Powell D.C. 2012. HRV levels for tree density and species composition were derived from Countryman 2011.</p> <p>HRV analysis in both of these documents is based on disturbance process modeling utilizing the Vegetation Dynamics Development Tool (VDDT). This modeling program was developed by a cadre of multiple ecological scientists in order to evaluate the effects of disturbance regimes over time and develop a range of variation for forest conditions based on those effects. The disturbance regimes are based on the best available science describing the function of</p>

			<p>pre-settlement disturbance processes.</p> <p>Although the disturbance regimes are based on pre-settlement conditions, the model itself is not based on a static timeframe and is not meant to represent a specific “snapshot” in time. The model is designed to simulate the long time periods (centuries) that are necessary to develop a range of variation in forest conditions that would be expected to occur, given the various natural disturbance types, sizes and frequency. This range of variation is then used to provide an ecological basis for comparison to current conditions to assist in determining the current forest health and associated resiliency to disturbance. The main idea is that if landscapes are restored to and maintained within this natural range of variation, then this represents our best chance to maintain ecological integrity and sustainability over time. This modeling was conducted at the forest-wide scale and is the source of the HRV values used for analysis in the Patrick project.</p> <p>See response to comments BC-2 and BMBP-70</p>
<p>This is the end game for the forest’s liquidation as the EA admits that’s the proposed activities under alternative 2 and 3 would temporarily move tree density away from HRV...(page 53)</p>	BMBP-75	Silviculture	<p>It is unclear what the commentor is inferring by the statement “this is the end game for the Forest’s liquidation”. There would be a temporary movement away from HRV for tree densities in the MUF and CUF forest types or PVGs. This is due to the current forest conditions and the need to shift species composition, stand structures and insect and disease susceptibility toward HRV. As stated in the comment, EA and silviculture report, this is a temporary movement away from HRV. As species composition and stand structure move toward HRV stand densities will also trend toward</p>

			<p>HRV over time. This would be a short-term effect for a long term benefit. We cannot address the current departure in stand structure and species composition without temporarily reducing tree density.</p> <p>Also see comments GHCC-10, BMBP-9 and BMBP-40</p>
<p>Maximizing overall stand growth and individual tree vigor for continued perpetual timber harvest is the objective of all these planned vegetative management manipulations with little to no consideration of other multiple uses of the National Forest or particular area. (page 53)</p>	BMBP-76	Silviculture	<p>Increasing growth and vigor of individual trees and across entire stands also increases resiliency to disturbance while increasing overall forest health. These are objectives of the project and are described in the purpose and need as well as proposed action sections in the EA. Management for perpetual timber harvest would involve moving toward a regulated state within forest stands. This concept is designed around maximizing yield and working within a set harvest schedule that involves even aged harvest, pre-commercial thinning, and reforestation. This is not part of this project design. There are no even aged harvest or planting/reforestation activities proposed as part of this project. Proposed treatments were designed around restoration goals in order to move stands toward desired conditions. They were not designed to maximize yield for future harvest.</p>
<p>The EA admits that density levels within both the moist and cold forests types are currently below HRV for closed densities forcing the agency to find alternative rationals for logging the few areas of moist and cold forest types in the Patrick sale reducing diversity. (page 53)</p>	BMBP-77	Silviculture	<p>See response to comment GHCC-10, BMBP-9, BMBP-40 and BMBP-75</p>
<p>This is one long drawn out argument for using logging to examine and mid seral</p>	BMBP-78	Silviculture	<p>The need for commercial thinning is based on the departure of the existing conditions from desired</p>

stages because that is what available to log in the Patrick Sale area for dry & cold (late) and moist(mid) and to pursue the undisclosed outdated of managing for Ponderosa pine plantations and logging density wherever it is found, regardless of the ecological consequences. (page 55)			conditions. Plantations are created through planting, there is no tree planting proposed as part of this project.
The use of seral stages to set objectives for management is very artificial as it seeks to block climax forest (late successional old growth) from developing in cold and moist forest as it naturally would and to artificially change tree species composition from more moisture associated species in moist forest conditions to tree species typically found in greater abundance in dry forest types ignoring the different roles these forest types play in moisture retention versus drought resilience in dry forests and the different habitat niches these forests provide for associated wildlife species.(page 55)	BMBP-79	Silviculture	There is no objective to block the development of climax forests or late successional conditions. The need for treatment was based on the departure from HRV. Currently the landscape is above HRV within the mid and late successional stages. Proposed treatments are designed to move conditions toward HRV. Moist, cold and dry forest types were analyzed separately due to the different environmental conditions in which they occur. The higher productivity and moisture levels found in portions of the moist and cold forest types are reflected within the HRV ranges for those forest types. See silviculture section of the EA for HRV levels associated with density, species composition and stand structure.
Again there is no science studies cited for assumed results of silvicultural management proposed reducing overall susceptibility to insect outbreaks (page 55)	BMBP-80	Silviculture	See silviculture report.
The EA's whole discussion of defoliating insects and disease fails to disclose and analyze the positive roles of the natural disturbance in creating snags and cavities for woodpeckers, Pacific fisher and other wildlife species creating opening for edge adapted species and tree regeneration and generally thinning the forest naturally which the Forest Service evidently sees as competition for its outdated logging mission	BMBP-81	Wildlife/Silviculture	The agency does not discount the importance of natural disturbance. To the contrary the concept of managing forest conditions toward HRV is based on managing conditions toward what would occur under a natural disturbance regime. However, due to fire suppression over the past 100+ years in addition to many other factors the forest conditions within this project area are outside of what would occur under natural conditions.

that it turns into an excuse to artificially thin and create openings with more negative results. (page 56)			
Since the Forest Service usually doesn't start with a true HRV baseline of pre-European colonization conditions, HRV can't be the foundational premise for an HRV of insect susceptibility. (page 56)	BMBP-82	Silviculture	See response to comments BC-2, BMBP 70 & 74.
There is no credible basis for the forest service to know the HRV of susceptible levels to defoliating insects. The science for how insect defoliation epidemics arise is more complex than just tree density spacing and layered crowns. Further there is a false assumption that all insect infestations have negative effects. (page 56)		Silviculture	The susceptibility to insects and disease is based on the following white paper: Schmitt, C. L., & Powell, D. C. (2012). Range of variation recommendations for insect and disease susceptibility. Also see silviculture report for more detail.
Note all the uncited science citations missing on page 56-57 for theoretically supporting the conclusions that change to tree density, species composition, structure "will have a positive effects on the susceptibility to insects and disease and that stand susceptibility to dwarf mistletoe spread and interfere and stand intensification is expected to be reduced through removal of moderate to severely infected trees, spacing crowns and releasing understories from infected over stories. (page 57)	BMBP-83	Silviculture	See response to BMBP-84 and 85.
Do these science citations really exist to support these assumptions? These errors in the text are even highlighted in bright yellow showing what a rush job was involved with this EA,.... (page 57)	BMBP-84	NEPA	The links for the citations that were broken were highlighted when the EA was converted to a PDF. Those have been corrected and can be provided.
Why should we believe these flimsy	BMBP-85	Silviculture	Thank you for identifying this error in EA

rationales for logging to reduce defoliating insect infestations when reference sources are not cited or errors in the text are not caught or corrected and tables jump to unwarranted conclusions? More telling is commercial logging being posed as the solution to every perceived problem. (page 57)			document. The citation errors have been corrected. There are several different treatments proposed as part of this project. Commercial harvest is just one tool we are proposing to move forest stands toward desired conditions.
Table 27 is absurd as there can be no known HRV% for insect defoliation historically. (page 57)	BMBP-86	Silviculture	Table 27 of the EA is not exhibiting a historic range of insect defoliation. The table displays a range of variability for forest susceptibility to various insects and diseases including defoliating insects. This susceptibility is based on forest conditions such as structure stage, species composition and densities. The range of variation for these forest attributes can be tied directly to a range of variation for forest susceptibility to the various vectors that are heavily influenced by changing forest conditions. These range of variation levels for insect and disease susceptibility are derived from the following white paper: Schmitt, C. L., & Powell, D. C. (2012). <i>Range of variation recommendations for insect and disease susceptibility</i> . Also see silviculture report for more detail.
Logging in RHCAs does not restore RHCAs as claimed for Alt. 2. This claim completely ignores a large body of science from over decades that demonstrates the negative impacts of commercial size logging....(page 59)	BMBP-87	Silviculture	<p>Without knowing what science or literature the commentor is referring to we cannot accurately address this comment. RHCA treatments would be designed to restore vegetation conditions by moving conditions toward HRV. See EA and silviculture report for more information.</p> <p>Thank you for your passion and comment on RHCA management.</p> <p>We think the science has matured or evolved since the development of PACFISH/INFISH. We</p>

			have learned that fire exclusion has promoted an increase in cover of late seral species in RHCAs and this is leading to uncharacteristic fire effects in landscapes with abundant dry forest conditions that ought to have low severity and frequent wildfire. The analysis in the EA lays out the impacts of treatments in RHCAs versus those from doing no action.
We are strongly opposed to commercial logging and heavy equipment use in RHCAs. (page 59)	BMBP-88	Silviculture	<p>The effects of logging within the outer portions of RHCAs was analyzed through the IDT process. See detailed effects analysis and mitigations in the soils, aquatics and water resources reports.</p> <p>See response to comments BC-4, OW-4, GHCC-1, BMBP-3 and BMBP-30 through 36.</p>
Inadequate cumulative effects analysis on p.59. The EA saying that proposed silviculture activities would be “setting back the time scale for elevated risk to uncharacteristic” risk is a euphemistic way of admitting that there is no current defoliating insect epidemic and that this is a made up excuse to log. (page 59)	BMBP-89	Silviculture	<p>The EA has been mis-quoted here. The EA states: “Proposed silviculture activities respond to the purpose and need by helping to move species composition, forest structure and tree density towards their historical ranges of variability and setting back the time scale for elevated risk to uncharacteristic disturbance.”</p> <p>The analysis clearly exhibits that forest conditions are outside of HRV. Species composition and stand structure play a major role in the susceptibility of forest stands to defoliating insects. There is currently an excess of multi-story stands and late seral, shade tolerant species across the project area. The EA and silviculture report detail these departed conditions. None of the analysis state that there is currently an epidemic for defoliating insects, the analysis simply states the current conditions elevate the susceptibility to these disturbance agents.</p>

			It is unclear in the commentors statement how the cumulative effects analysis is inadequate or deficient.
Switching the scale of effects from the project level to the forest level is commonly used by the forest service to artificially minimize the severity of effects to local receptors such as wildlife and local communities (see p.60 2 paragraph) The local and project level scale of management impacts is far from minor at 46, 653 acres with so much planned removal of forest cover and the sterilizing effect of reducing diversity of forest stand compositions of plants and wildlife. (page 60)	BMBP-90	Silviculture	<p>The 46,653 acres within the project area contain many different proposed treatments including no treatment, commercial harvest, non-commercial thinning and prescribed burning. See the EA pages 28-33 for a breakdown of treatment types by acreage.</p> <p>Many of these treatments would have little to no effect on forest cover. Commercial harvest would temporarily reduce forest cover in order to increase overall forest health. However, these reductions would be temporary as the growth rates within these stands increase post treatment. Treatments would be designed to increase overall vegetation diversity across the project area. See silviculture portion of the EA as well as the associated silviculture report for more detail.</p>
This is stock misleading text by the forest regarding climate change that could have been written by a timber industry lobbyist. The biased representation of the science misleads by omission such as by not acknowledging that CO2 emissions can continue to cause climate change just not a momentary influence but over up to 300 years. The analysis also fails to recognize that by definition climate change (aka global warming) is caused by a combination of many relatively small emissions sources and by this point we are facing the biggest global crisis of our time, well past multiple tipping points for and all human caused	BMBP-91	Silviculture	It is unclear what scientific sources the commentor is referencing. Therefore, we cannot accurately address the concerns listed. Much of the concerns identified in this comment are outside the scope of this project.

fossil fuel emissions need to be curtailed. (page 60)			
<p>Forestry and other land uses at 12% of human caused global CO2 emissions is a major contributor to climate change, not a contribution that can be ignored. The forestry sectors emissions may have declined over the last decade but the Forest Service is ramping them up again by greatly accelerates the pace an increasing the scale and intensity of logging. The new administration is not denying the reality of climate change and the forest service should pay attention to this federal policy shift and start acting on the basis of recent science supporting much greater protection of mature and old growth forest as a major natural carbon sink. The agency must be familiar with Bev Laws studies supporting preservation of forest carbon sequestration and the many science studies supporting Suzanne Simards research that forests are a cooperation community in which trees actively send out alerts of increasing insect threats so that the other trees will send out chemical defenses. In other words the forests service should not be cutting down and removing forest cover to restore the forest but should be keeping forests as intact as possible to maximize carbon sequestration to slow or reduce climate change effects and to allow the forest to protect itself and engage in self-thinning when needed, yet FS plans to separate trees, disrupt soil mycelium that transfer nutrients to the trees and engage in large scale</p>	BMBP-92	Silviculture	<p>See purpose and need on page 11 of the EA. Proposed activities are in response to the identified purpose and need. To assume that no action across the project area would have the most benefit to mitigating the effects of climate change assumes that these forest systems that are currently in good ecological condition. The effects of fire suppression, past insect and disease outbreaks, historic logging practices and prolonged drought conditions have altered the current conditions of these forests. This is evident by the departure form HRV across the majority of forest attributes measured in the analysis.</p> <p>As the climate changes and precipitation levels decrease many of the identified forest stands will have less capacity to support trees. In particular late seral tree species that generally have shallow root systems and require increased moisture levels will be at high risk of mortality. The treatments in this project are designed to increase overall forest health and resiliency to disturbance, including climate change.</p>

incremental deforestation (page 61).			
In general, the EA climate change analysis is extremely biased and fails to disclose scientific controversy. (page 62)	BMBP-93	Silviculture	This is a general comment. Without specific examples of how our analysis appears biased or fails to disclose science we cannot properly address this comment. Our climate change analysis used best available and recent science to disclose and discuss the effects of climate change and potential effects of this proposed project.
The EA fails to disclose that wood products are documented to usually only store carbon for up to decade at most with the limited exception being for building which still may not store carbon as long as old growth tree that then becomes a snag and later a log still storing carbon. Its not clear in the science that commercial logging reduces fire severity or insect infestations let alone tree diseases such as root rot and mistletoe, which can be spread by logging. (page 62)	BMBP-94	Silviculture	There is a large amount of scientific literature documenting the benefits of thinning in relation to reducing the threat of insects and disease and wildfire while increasing over all forest health. See silviculture report for more details and associated scientific literature within the Work Cited section.
The Patrick EA and other EAs using the same language is repeating falsehoods and perpetuating myths by not clarifying that commercially logged forest can take decades to over a century to grow back into the same level of carbon storage as original mature and old growth stands that had many more trees . Likewise the EA fails to clarify that small young trees growing back do not sequester anywhere near as much carbon as the mature or large trees removed by logging. (page 62)	BMBP-95	Silviculture	<p>The commercial thinning proposed within this project are not final harvests designed to remove the majority of old trees replacing them with new seedlings (seed tree, shelterwood or clearcut harvest). No trees 21 inches DBH or greater would be removed as part of this project. Thinning would be designed to move stands toward old growth conditions by favoring the oldest, largest, and healthiest trees of appropriate species for retention. Proposed thinning treatments would actually increase growth rates in residual trees consequently increasing carbon sequestration. See silviculture report for more details on benefits of treatment.</p> <p>The rate of carbon sequestration within an individual tree is strongly correlated with the</p>

			growth rate of the tree. Although older, larger trees may store more carbon than smaller trees based purely on size the actual rate of sequestration is often lower due to reduced growth rates.
The Forest service fails to quantify potential CO2 and other greenhouse gas emissions that could be produced from the proposed management action in the Patrick sale.....(page 63)	BMBP-96	Silviculture	See cumulative effects portion of silviculture report for potential effects of climate change.
We want to know what the effects of the Patrick sale would be to Gray wolves; Canada Lynx; Pacificfisher... (page 95)	BMBP-97	Wildlife	See Wildlife BE for Patrick Project.
Inaccessible agency project file. There is not even any disclosure of how to find this separate document and many people in the rural public including myself do not have internet access. The purpose of an EA or EIS is to make the environmental effects analysis available to the public for comment. (page 95)	BMBP-98	NEPA	One of the purposes for providing electronic copies rather than sending out paper copies to any interested individual is to reduce the amount of paper products/wood products used in this process. If the commentor would like a paper copy of the EA or any associated reports they will be provided that upon request.
Please mail me copies of these full length viability assessments for martin, Pileated woodpecker and northern goshawk for the Blue mountains and the individual National forests....(page 96)	BMBP-99	Wildlife	For detailed information of how these analyses are conducted see: Wales, B.C. 2011a. American marten (<i>Martes americana</i>) Model Application and Assessment of Results. Wallowa-Whitman National Forest. Wales, B.C. 2011b. Pileated Woodpecker (<i>Dyrocopus pileatus</i>) Model Application and Assessment of Results. Wallowa-Whitman National Forest. Wales, B.C. 2011c. Northern goshawk (<i>Accipiter gentilis</i>) Model Application and Assessment of Results. Wallowa-Whitman National Forest.
Its simply not true that managing forest structure, composition and density toward	BMBP-100	Wildlife	By managing the forest structure and habitat similarly to historical conditions, it is assumed

an assumed historic range of variability usually based on baseline data from after European colonization.....(page 97)			that remaining habitat will be adequate to ensure population viability because species survived those levels of habitat in the past to be present today (Landres et al. 1999)
Since when is there population decline for Northern Flicker? (page 98)	BMBP-101	Wildlife	See EA at 124. Population trend data is obtained from two sources, Breeding Bird surveys and Partners in Flight regional indices of species security. Stable trends have shown long-term decreases in Northern Flicker populations.
As ODFW is intended to manage wildlife and the Forest Service is supposed to protect wildlife habitat, the FS should follow ODFW recommendations. (page 99)	BMBP-102	Wildlife	ODFW and USFS work collaboratively to manage and protect wildlife habitat. See EA at 101. This project impacts less than 0.006% of suitable habitat for marten across the forest. Post-treatment availability of source habitat for marten would continue to exceed the threshold of 40% of the historical amount in the North Fork Burnt River watershed.
We are opposed to any commercial logging, large snag removal, mistletoe tree felling or removal and prescribed burning in the identified 2,198 acres of marten source habitat(page 99 &100)	BMBP-103	Wildlife	See EA at 101. This project impacts less than 0.006% of suitable habitat for marten across the forest. Post-treatment availability of source habitat for marten would continue to exceed the threshold of 40% of the historical amount in the North Fork Burnt River watershed. The overall direct, indirect, and cumulative effects would result in a small negative effect to marten habitat.
This is inadequate cumulative effects analysis for combined Patrick and Austin projects loss of marten source habitat... (page 101)	BMBP-104	Wildlife	See EA at 101. This project impacts less than 0.006% of suitable habitat for marten across the forest. Post-treatment availability of source habitat for marten would continue to exceed the threshold of 40% of the historical amount in the North Fork Burnt River watershed. The overall direct, indirect, and cumulative effects would result in a small negative effect to marten habitat.
Drop the planned commercial logging in 6,011 acres of Alt 3 goshawk source habitat....(page 106)	BMBP-105	Wildlife	Effects to goshawk are discussed in the preliminary EA on page 107. Goshawks do typically select nest areas in mature forest with

			<p>high canopy closure. However, maintaining suitable foraging areas is equally as important to successful reproduction as providing nesting habitat. The decline in suitable foraging areas for goshawk resulting from the loss of forest openings that provide habitat for their prey has been identified as an issue by Wisdom et al. (2000). Wisdom et al. (2000) recommends using silviculture prescriptions in conjunction with restoration of fire regimes to create a mix of cover types and structural stages within the potential home range of each active goshawk nest. (Wisdom et al. 2000. Source habitats for terrestrial vertebrates of focus in the interior Columbia basin: broad-scale trends and management implications. PNW-GTR-485. USDA, Forest Service, PNW Research Station).</p>
<p>There is ample scientific support for not commercial logging goshawk suitable source habitat in the Patrick Sale as planned....(page 106)</p>	BMBP-106	Wildlife	<p>Effects to goshawk are discussed in the preliminary EA on page 107. Goshawks do typically select nest areas in mature forest with high canopy closure. However, maintaining suitable foraging areas is equally as important to successful reproduction as providing nesting habitat. The decline in suitable foraging areas for goshawk resulting from the loss of forest openings that provide habitat for their prey has been identified as an issue by Wisdom et al. (2000). Wisdom et al. (2000) recommends using silviculture prescriptions in conjunction with restoration of fire regimes to create a mix of cover types and structural stages within the potential home range of each active goshawk nest. (Wisdom et al. 2000. Source habitats for terrestrial vertebrates of focus in the interior Columbia basin: broad-scale trends and management implications. PNW-GTR-485.</p>

			USDA, Forest Service, PNW Research Station).
This is insufficient cumulative analysis of effects to goshawk, marten, pileated woodpecker and other species....(page 107)	BMBP-107	Wildlife	Thank you for your comment please see cumulative effects analysis on pages 95-139 of wildlife section.
The effects summary for goshawk, as for marten slaps together a finding of continued viability not supported by science and other analysis in the EA for that species....(page 107)	BMBP-108	Wildlife	The entire goshawk section (pg 101-108) and marten section (pg 98-101) lay out the rationale for the viability calls. The biology, habitat, and threats to the species were considered in conjunction with the scale of proposed treatments to determine impacts to population viability.
Drop the commercial logging planned for the 2,464 acres of pileated source habitat under Alt 2 and 2,359 acres under Alt 3. (page 112)	BMBP-109	Wildlife	Effects to pileated woodpecker are discussed in the preliminary EA on pages 111 & 112. Removing source habitat does not necessarily impact population viability. The small scale of source habitat that would be removed under this project only equates to a forest-level reduction of 1.2% of total source habitat.
Long term (30-40 years or more) loss of two breeding pairs of Pileated woodpeckers in the NFBR watershed from the Patrick Sale is unacceptable. (page 113)	BMBP-110	Wildlife	See EA at 112. The proposed treatments may impact individuals and their habitat but will not impact pileated woodpecker population viability on the forest. Under both action alternatives, post-treatment availability of source habitat would continue to exceed the threshold of 40% of the historical amount in the North Fork Burnt River watershed.
The FS should close and decommission more roads wherever current road density exceeds Forest Plan standards and increase security for elk....(page 119)	BMBP-111	Wildlife	The effects of roads on elk are well-documented throughout the literature and effects of roads on elk are disclosed in the preliminary EA on pg. 117-118.
Why wait for a Forest-wide plan when more roads could be closed or decommissioned sooner through project planning? (page 121)	BMBP-112	Wildlife	Development of Travel Management Plan is ongoing.
Forest cover have different effects for elk than distance to roads....Cover is still needed. (page 121)	BMBP-113	Wildlife	See EA at 118-120 for a description of the effects to elk from loss of cover. More than 50% of the project area would still provide cover for elk.
The analysis re:MIS primary excavators	BMBP-114	Wildlife	See EA 123-132 for effects to snags and snag-

neglects consideration of the continued reduction in overall snag abundance from so much commercial logging...(page 132)This is inappropriate switching of scale of analysis. (page 132)			dependent species. Current snag densities are described for multiple scales including the forest scale and the watershed scale (EA at 126).
The landbirds and neotropical migratory bird species effects analysis is far too general failing to address the fate of the species in the project area...(page 140)	BMBP-115	Wildlife	Project activities are consistent with the habitat management recommendations proposed by Altman and Bresson (2017) (EA at 134)
The bird analysis also evades responsibility for avoiding degradation of potential habitat for species like...(page 140)	BMBP-116	Wildlife	Effects to black-backed woodpecker, Lewis' Woodpecker, and Williamson's Sapsucker is described in the Primary Cavity Excavator section (EA at 123)
Since Geiser, trout, and Patrick Creeks are 303(d) listed for sediment, no more impairment for fine sediment is allowed to be caused to them...(page 145)	BMBP-117	Hydrology	Sediment is a pollutant that is also a naturally occurring process within landscapes. We look at places with high gradient as source areas, places with moderate gradients have transport areas (meaning most of the sediments are not stored, rather processed through these areas) and low gradients are places where sediments should be accumulating or be deposited. Many streams are disconnected from their floodplains and proposed activities will restore or improve this process, especially the NCT treatments where trees will be felled and left instream. We take a hard look at activities within these areas to minimize sediment from linking from the Proposed Action to waterbodies in the Project Area, especially within streams that are water quality impaired through the state 303(d) list. We had observed that many of these water quality impairments were first identified by the Whitman RD in the Watershed Analysis. They were listed not because of excessive fine sediments, but because of cobble embeddedness that was likely due to historic mining practices.

Since Trout Creek, Patrick Creek and NFBR are all 303 (d) listed for water temperature, impairment, no further water temperature increase is allowed to be caused for these creeks...(page 148)	BMBP-118	Hydrology	These streams are 303(d) limited for the pollutant of water temperature as identified in the EA. The EA recognizes that more tree cover is present than hardwood cover, largely due to past fire suppression efforts and that hardwood cover provides for a higher quality shade (influencing solar radiation and microclimate). Appendix B contains Project Design Criteria of WQ-2 that limits the acres of RVR treatments to not exceed 25% each year to minimize any impacts to solar radiation from implementation of the project. We believe this will offset any hardwood cover changes across the project area, based on implementing similar projects in similar riparian areas as Patrick. Tradeoffs are framed in our analysis that evaluates the fuel accumulations of fire suppression and condition of our riparian areas under the no action and those under that action alternatives.
The analysis of stream temperatures data on EA p 148 raises many concerns about further impairment of stream temperatures from proposed commercial logging within RHCAs and construction of temporary roads in RHCAs. (page 148)	BMBP-119	Hydrology	The EA on page 148 presents the existing condition for the project area. The direct, indirect and cumulative effects analysis is later in the EA. On page 148 the existing condition for water withdrawals that are tied to water rights are discussed for the project area. Project design criteria were designed to minimize project impacts tied to the activities that you mention in your comment.
The analysis for effects of the No action alternative is heavily biased by the implicit assumption that the action alternatives would prevent large scale high severity wildfire...(page 150)	BMBP-120	Hydrology	The analysis has been framed by our years of work experience in the Blue Mountain landscape participating in Burned Area Emergency Rehabilitation (BAER) after wildfire and looking at the outcomes of fire disturbances in thinned and unthinned areas. Our analysis reflects professional judgement in this scenario. We also think an active prescribed fire program will maintain the

			condition over time and reduce the threat of an uncharacteristic wildfire.
We are concerned that under alternative 2, 4,693 acres of so-called Riparian vegetation restoration units are being planned. This sounds like overkill with no distinction being made as to conifers being the only or site-specific primary source of current stream shading. Not all riparian sites are conducive to growing hardwoods especially these bordered by steep slopes with natural topography and conifer shading. RVR units should be prioritized in open meadow lower elevation conditions where riparian hardwoods were most likely to naturally occur. We are strongly opposed to all commercial logging, temporary road building.....(page 154)	BMBP-121	Hydrology/Aquatics	<p>Thank you for sharing your perspective on the kinds of valley settings that will have a hardwood response. Rod Clausnitzer developed a nice successional stage guide for the Grand Fir Series that illustrates how hardwoods are provided following disturbances. Hardwoods commonly follow disturbance pathways and confined valley would also likely have hardwoods following a wildfire or insect and disease pathway. Especially within the Grand Fir series that is abundant in the Patrick Project Area.</p> <p>We see you are opposed to getting some commercial value from thinning portions of the outer RHCA. Much of the work that is occurring within the inner portion of the RHCA is non commercial and you are in agreement with that. The management that will influence hardwoods is the non commercial piece. The commercial and haul routes are separated away from the streams.</p>
We advocate for far less management within the RHCAs as some RHCAs would be degraded by the proposed management and some don't need the proposed management. (page 154)	BMBP-122	Hydrology	Thank you for sharing your opinion on these matters. We appreciate that you support the NCT thinning and prescribed fire as proposed in the EA. The commercial thinning activities will occur set back from the stream.
There should be no pile burning within RHCAs instead using broadcast burning or lop and scattering. (page 154)	BMBP-123	Hydrology	Thank you for sharing your comments around consumption of fuels through the use of fire. We wanted to minimize impacts from pile burning in RHCAs and developed a project design criteria for minimizing the size of piles to be burnt in RHCAs. VG-6 states that slash piles will not be larger than four feet high and six feet in diameter.
There should be no streambank trees felled that provide bank stability. This is a	BMBP-124	Hydrology	Thanks for your comment. If we look at INFISH, we see that the bank stability RMO is relevant for

standard project design criteria in other forest Service EA or EIS plans...(page 155)			non-forested systems. Hardwoods have denser and more fibrous shallow root systems that provide orders of magnitude better bank stability than conifers and higher quality stream shading.
Drop all pile burning in RHCAs. (page 156)	BMBP-125	Hydrology	Please see previous comment (BMBP-123) that discusses that no pile burning within RHCAs.
The EA analysis seems to carefully neglect to assess the impact of commercial logging in RHCAs to stream temperature. (page 156)	BMBP-126	Hydrology	The commercial thinning activities were carefully designed to not have detrimental impacts to water quality by being set back from the stream. It disconnects commercial activities from having impacts.
A statement of no impact does not constitute the requisite NEPA in depth analysis to demonstrate that. (page 157)	BMBP-127	Hydrology	This comment is nested in the introduction header section for evaluating effects from Existing and Temporary Roads: Maintenance, Construction and Haul. The in-depth analysis follows in the Soil Water to Plants, Channel Morphology, Channel Complexity, Channel Substrate, Streamflow and Stream Temperatures Sections.
We are strongly opposed to new construction of any temporary roads especially not in RHCAs. How much of the excess and unacceptable 38.5 miles of new temporary roads is planned for within RHCAs. (page 157)	BMBP-128	Hydrology	Thank you for your comment. Temporary roads may have resource impacts if not properly planned. Of the 38.5 miles of temporary road proposed for the project, approximately 0.9 miles of temporary road are located in RHCAs. The analysis on pages 157-159 of the draft EA illustrate the new disturbances from temporary roads and their proximity to a stream.
We are opposed to the construction of temporary roads to allow for new stream crossings. (page 157)	BMBP-129	Hydrology	Stream crossings on temporary roads have the potential for project impacts to channel substrate and channel morphology if PDCs are not implemented. PDCs function like best management practices. The Project Hydrologist has developed PDCs for reducing potential impacts on temporary roads in WQ 2 and 3 in Appendix B. Sixteen temporary culverts would be added to category 4, intermittent streams in the project.

It would likely violate the Clean Water act to construct temporary roads within the RHCAs of sediment impaired 303 (d) listed streams...(page 158)	BMBP-130	Hydrology	It's important to recognize that water quality impaired streams are present when developing the proposed action and project design criteria (PDC). There are abundant PDCs in Appendix B for minimizing sediment impacts to waterbodies. We describe the need to pre-approve all stream crossing sites, how to cross a stream, how to repair damaged banks, when to stop haul if sediment laden water is moving from the road near the stream, new drainage rock would be installed if a wet area was observed, storm proofing the design by outsloping, adding water drainage features and locating temporary roads on benches to reduce sediment risks and have drainage installed if retained over-winter. We believe we can meet the purpose and need of the project while minimizing sedimentation impacts to the waterbodies. We have completed BMP monitoring for these kinds of activities and have not found sediment connecting from temporary roads to adjacent waterbodies.
Not analyzing for effects to aquatic species outside the project boundary virtually ensures that the forest service won't determine there to be any effect to aquatic species outside the project area as the scale of analysis predetermined...(page 164)	BMBP-131	Aquatics	It was determined that effects from project activities would not impact Indicator's water quality and fish habitat and Measures outside of (downstream of) the project area. The only effect that has the potential for short term downstream sediment pulse is in-water work associated with road stream crossings, including replacement of up to 3 culverts that are impeding fish passage. Sediment pulse could increase turbidity from disturbance for a short duration (see Page 8 of Aquatic Specialist Report). Effects from increased sediment would be short term and local. Sediment is expected to settle out within 0.5 miles of construction when flows are low (Bilby 1985; Duncan 1987; Foltz et

			<p>al. 2008; Lachance et al. 2008). In addition, page 171 of EA cites personal communication with Alan Miller, Fisheries Biologist Wallowa Mountain RD, Wallowa-Whitman National Forest, “measureable increases in fine sediment following culvert replacement projects rarely extend downstream more than 1/8 mile (0.125 miles).” Page 168.</p> <p>The overall effect of replacing fish passage barrier culverts is beneficial to fish and aquatic organisms, allowing them to access upstream habitat and potentially cooler water temperatures in headwater areas. Large woody debris, pool frequency, channel and bank stability, stream temperature, and turbidity levels on areas outside of the project area would not have direct or indirect effects from other project activities. Fish and aquatic organism populations and habitat</p>
<p>Of all the potential direct and indirect effects to fish and other aquatic life, we are opposed to all of these with no longterm restoration benefit to fish aquatic life and or water quality....(page 165)</p>	BMBP-132	Aquatics	<p>The purpose and need can be found on page 13. The purpose and need does not include longterm restoration benefits to fish and aquatic life and/or water quality. Therefore, this project was not designed with these objectives. It was designed for historic range of variability forest characteristics. There is one listing for purpose and need that relates to riparian areas, though it only says wildlife, not aquatics:</p> <ul style="list-style-type: none"> ▪ Maintaining and restoring wet meadows, quaking aspen, mountain mahogany, and deciduous riparian shrubs would provide valuable wildlife habitat. <p>The type of restoration that will occur in streams in these subwatersheds is passive restoration-restoring hardwood vegetation composition in riparian areas, restoring fire regimes. The “active</p>

			restoration” included in the proposed action is replacement of 3 road stream crossings that are barriers to fish passage.
90% of road stream crossings in the project are what? There an incomplete sentence at the end of the paragraph (page 167)	BMBP-133	Aquatics	Ninety percent of road stream crossing structures in the project area are blocked with debris, collapsed, or filled with rock or native substrate and need maintenance (Rabe Consulting 2018). Under the no action alternative, these would remain or be treated as routine road maintenance when funds are available. These activities include installing, replacing, or removing road stream crossings structures, such as culverts on open and closed roads.
We are strongly opposed to the construction of .9 miles of so-called temporary road within Category 1,2, and 4 RHCAs under Alternative 2. (page 167)	BMBP-134	Aquatics	<p>Thank you for your comment. Some of these segments are utilizing existing road surfaces and some will be new disturbance, as outlined on pages 157-159 in the EA. Alternative 3 does not include these temporary roads.</p> <p>The temporary roads proposed within RHCAs consist of small segments of road designed to keep commercial harvest/thinning activities away from stream courses and facilitate the appropriate logging system for the site. These temporary roads reduce yarding distances and lesson impacts by allowing strategic placement of landings at proper locations with respect to slope and other various terrain features.</p>
We are strongly opposed to the reopening of closed roads to access logging sale limits for log trucks hauling and for heavy equipment....page 168)	BMBP-135	Aquatics	Open and closed roads that exist in the project area will be utilized to access units and stands that are included for treatment to meet the purpose and need of the project. Utilizing existing road prisms negates the need for new road building. Roads should be left in an improved condition in terms

			of water resources since maintenance activities would include drainage and erosion improvements. We analyzed effects associated with temporarily opening these closed roads.
The Patrick EA fails to quantify the amounts of fine sediment delivery and shade loss to streams...(page 168)	BMBP-136	Aquatics	See Water Resources page 160, and 161, 166 for analysis for shade loss and page 165 in EA for discussion used for Water Erosion Prediction Project (WEPP) Model used to assess sediment erosion for the project (in Watershed Specialist Report in Project File). Methods used for running the model are summarized in the Soils Report (Young 2019).
The conclusion of no direct effects to fish and aquatic species or habitat from management actions proposed in alternative 2 or 3 on EA p 170 directly contradicts the direct effects on EA...(page 170)	BMBP-137	Aquatics	Thank you for the comment. We believe the analysis is consistent with the conclusions and finding statements in the EA.
There is no detailed or site-specific analysis to support the EA conclusion that the quantity and quality of pools would be maintained with proposed commercial logging in RHCAs under Alt 2. (page 172)	BMBP-138	Aquatics	<p>See Water Resources page 160, “PDCs would immediately increase the amount of coarse wood material in the channel which would in time lead to increased pool frequency and the development of debris jams.”</p> <p>Pool information in the Patrick Project area comes from Forest Service Level II surveys that exist on fish bearing streams that show that streams are not meeting RMOs for pool frequency (see aquatics Existing Conditions report). However, no project activity would impact pools. Ultimately, pool quantity or quality could be impacted from sediment filling them, wood removed from them, removing of future LWD recruitment, conditions for a high intensity fire to leave conditions for landslides, which would fill pools. None of these</p>

			effects are expected to occur. There are no direct or indirect effects that would cause pool loss. See page 13 Aquatic Specialist report Measure: Pools (Road Activities) and page 14 Measure: Pools (Commercial Harvest), and page 17 Measure: Pools (NCT and PCT).
No in depth or site specific analysis supporting the EA conclusion that there would be no change to channel and bank stability...(page 172)	BMBP-139	Aquatics	<p>Bank stability was a measure for indicator fish habitat in the Aquatics analysis, however no in depth of site specific analysis was completed because this was analyzed in hydrology/water resources. See pages 154, 156, 161, 165 Channel Morphology.</p> <p>No activities are proposed on the banks of streams.</p>
The EA fails to disclose the scientific controversy over riparian buffer size by not incorporating science that refutes the change to smaller riparian buffers. (page 172)	BMBP-140	Aquatics	Please share the science that you believe is controversial around riparian buffer size. INFISH recognizes that buffers should be adjusted to be narrower or wider based on Watershed Analysis planning. We are not proposing to adjust the buffers with this project. We are proposing to do vegetation management in RHCAs and be consistent with relevant Standards. The standard is apply silviculture practices for RHCAs to acquire desired vegetation characteristics where needed to attain RMOs. Apply silvicultural practices in a manner that does not retard attainment of RMOs and avoids adverse effects on inland native fish. We hope our intent is clear and that you understand our proposal and potential effects analysis.
Drop thinning (NCT or PCT) of trees on streambanks and within RHCAs where their removal could reduce direct or primarily shading of the stream...(page 173)	BMBP-141	Aquatics	Site visits to the planning area has shown us that in places where the NCT is proposed, there is an overstory canopy of large ponderosa pine and in most places a riparian shrub community. In the

			<p>absence of fire disturbance, conifers tend to close their canopy and riparian hardwoods decrease in cover. Streambanks may experience wildfire and conifers may be set back and hardwoods then become established. We believe it's minimal where small materials (less than 10 inch dbh) are providing bank stability and stream shading. This may occur through the project and would be very hard to guide implementation on a project area this size, because it is a unique condition. Furthermore, our forest plan shows that bank stability is a non-forested RMO and is not necessarily relevant to forested stands. Last, if young conifers are establishing on the streambank, then we are having lower ecological functions of nutrient cycling and less thermal protection than riparian hardwoods.</p>
Why isn't the planting of native hardwoods already occurring in the project area being planned for existing gaps in riparian hardwoods along streams. (page 173)	BMBP-142	Aquatics	<p>Healthy and diverse species of appropriate riparian hardwoods are present within the project area. Watershed and aquatic landscape planning has evolved over time to be root cause and not think about restoring symptoms, as we consider landscape issues. The root cause is the altered fire regime or history of timber harvest and the closure of the conifer canopy decreasing riparian hardwood cover. We believe we can treat the landscape and retain the hardwood cover without having to plant more.</p>
This is not the case as the EA claims on page 175 that no vegetation treatments would occur within the RHCAs in alt 3..(page 175)	BMBP-143	Aquatics	<p>The next paragraph after this comment discusses Broadcast Burning that may back into RHCAs. We think this analysis was relevant to your comment.</p>
Cumulative analysis to consider past effects not just present and reasonably foreseeable actions..this is clear violation of NEPA....(page 176)	BMBP-144	Aquatics	<p>Aquatics section EA Page 177</p> <p>Past and current management activities have had and continue to have impacts to aquatic habitat</p>

			and aquatic species in the Patrick PA. These impacts have been incorporated into the existing condition description and have likely resulted in a decline in aquatic and riparian habitats in the analysis area compared to the period prior to intensive management activities. Current activities on Forest Service lands are managed under the standards and guidelines of INFISH which were developed to speed the recovery of riparian and aquatic habitats.
Ranking low, moderate and high for cumulative effects risk also does not substitute for required in depth effects analysis under NEPA. This extremely inadequate cumulative effects analysis for aquatic species and their habitat. (page 176)	BMBP-145	Aquatics	The cumulative effects are split on adverse or beneficial and various activities are grouped into a risk category.
This is one of the worst aquatic analysis sections of an EA or EIS I have seen in 30 years of reading FS EAs and EISs. This is grossly inadequate analysis for cumulative effects. (page 177)	BMBP-146	Aquatics	Thank you for your comment. Our intent is to inform the public of the activities for that landscape and how those might have direct, indirect or cumulative effects. With EADM developments, we are trying to change how our NEPA looks and be more efficient and streamlined. The comment states that fish and invertebrate's species are not discussed in the report. Later on in the Aquatic Species section it discusses Pacific lamprey, redband trout, western ridged mussel, shortface lynx, and the Columbia pebblesnail.
MIS-Why are these specific details kept hidden away in a report with no summary or disclosure in the EA? (page 177)	BMBP-147	Aquatics	We are trying to provide efficiencies to EAs by referencing information in specialist reports. It's part of EADM. However, some of this data is contained in the report in the Water Resources or Aquatics sections. Please look at the supporting analysis files on the SOPA website for this project.
This aquatic section completely fails to	BMBP-148	Aquatics	Thanks for your comment. Much of your

include the critically needed cumulative effects analysis noting how many miles of streams with negative impacts...(page 177)			comment that is extended about cumulative effects from many miles (hundreds) of streams with negative impacts from prior road building within RHCAs, culverts that are barriers to fish distribution, high density of roads, roads poorly located in draw bottom areas are part of the past cumulative effects that are now integrated into the condition of the stream and riparian area and are reflected as RMOs. Also, if you look at the Specialist Report you will find additional detail. Watershed Analysis look at these legacy conditions and make recommendations and this NEPA document is suited to meeting the Purpose and Need. Last, instead of miles of stream with potential impacts it does list the acres.
Project activities would not contribute to a negative trend in viability of redband trout....certainly does not justify..(page 178)	BMBP-149	Aquatics	As the analysis shows, most project activities occur away from waterbodies and do not have a nexus to discharge sediment into a waterbody. Road crossings associated with the timber sale have the potential to have impacts and the analysis discussed these at length.
Wildlife: Why species viability determinations were made as “No effect””No impact” or “MIIH” (page 181)	BMBP-150	Wildlife	See Wildlife BE report. Species without habitat and/or not believed to be present near the project area were removed from further consideration because there would be no effect from this project.
Why is there only a preliminary evaluation of which PETS species have potential habitat within the project area in the EA? (page 181)	BMBP-151	Wildlife	See Wildlife BE report for project area.
Where is the analysis for potential management action effects to PETS species that may reside in or have suitable in the project area? (page 181)	BMBP-152	Wildlife	See Wildlife BE report for project area.
Lewis woodpecker depends on old burns and riparian habitat potential impacts to	BMBP-153	Wildlife	Per east side screens directive, trees over 21” DBH would not be harvested. Large ponderosa

their suitable habitat needs to be analyzed. (page 181)			pine habitat near riparian habitat would not be altered.
There appears to be no in-depth analysis of management actions effects to PETS wildlife species listed in Table 79. From action alternatives 2 & 3. This is a violation of both NEPA and ESA requirements. (page 181)	BMBP-154	Wildlife	See Wildlife BE report for project area.
How are some of the PETS species determined to be not present? Not explained...(page 182)	BMBP-155	Wildlife	See Wildlife BE report. Species without habitat and/or not believed to be present near the project area were removed from further consideration because there would be no effect from this project.
Listing species and agency conclusions does not constitute adequate analysis for PETS species under NEPA or adequate protection...(page 182)	BMBP-156	Wildlife	See Wildlife BE report for project area.
We remain concerned regarding contributing toward a trend toward federal listing or loss of a specie...(page 182)	BMBP-157	Wildlife	See Wildlife BE report for project area.
There is no detailed analysis in the EA considering the cumulative effects of the multiple sources of fine sediment delivery to streams from various types of management...(page 185)	BMBP-158	Aquatics	Aquatics tier to Water/hydro report for in depth analysis for sediment transport from project activities.
Have there been any surveys for Western Ridge mussels in the project area? (page 187)	BMBP-159	Aquatics	Surveys were done in the Powder River in 1963 and they were observed. We do not have more recent surveys from the Project Area and that is why they are identified as being suspected on the WWNF and in the analysis area. Their habitat is present within the project area (see Table 80).
What does a moderate risk mean for potential loss of viability for western ridge mussels in the Patrick project area? (page 187)	BMBP-160	Aquatics	Moderate risk within the potential loss of viability for western ridge mussel can be tracked back to the cumulative effect risk categories on page 176. Moderate – insignificant cumulative effects on aquatic habitat are likely to occur. A moderate

			rating assumes potential effects on habitat. The level of effects will not result in measurable changes in survival rates or population levels of aquatic species with special management status (i.e. ESA-listed, MIS, or Sensitive).
Drop the 3,930 acra of existing detrimental soils impacts from all heavy equipment use, including commercial logging,...(page 195)	BMBP-161	Soils	Would not meet purpose and need of the project
Drop the 52 sale units expected to exceed the forest plan standard of the 20% threshold for detrimental soil impacts from all heavy equipment...(page 196)	BMBP-162	Soils	Would not meet purpose and need of the project
Project design criteria including soil impacts need to be disclosed or discussed in the EA so the public considers their effectiveness and comment. New and total detrimental soil conditions should also be disclosed...(page 196)	BMBP-163	Soils	Refer to project design criteria specific to soil resources can be found on p.27 of the Soil Specialist Report and Appendix B of the EA. New and total detrimental soil conditions are disclosed in the EA p. 203 and Soil Specialist Report p. 66.
How does logging the mature shading canopy, “help restore soil moisture and plant community ecological processed? (page 197)	BMBP-164	Soils	This comment appears to be referencing treatment on droughty soil types. Thinning of overstocked vegetation, with a focus on maintaining vegetation densities within the capacity of the soil to support productive growth would be a benefit of treatment on droughty soil types.
Why aren’t hydric soils being identified in advance of implementation so as to buffer them beforehand and meet national and regional laws and regulations? (page 197)	BMBP-165	Soils	When identified during implementation, these soils would be buffered appropriately as wetlands to meet national and regional laws and regulations (see Aquatics Report).
Drop all logging and heavy equipment on steep slopes >30% to avoid displacement and erosion of topsoil...(page 198)	BMBP-166	Soils	The soil analysis evaluated logging systems based on hillslope suitability. Ground-based equipment is typically only used on slopes under 30 percent. See Timber Management Standards and Guidelines of the WWNF LRMP (4-50). Project Design Features will prevent unacceptable displacement and erosion on steep slopes.

Drop the 6,944 acres in Alternative 2 and the 6,173 acres in alt 3 with high erosion hazard...(page 199)	BMBP-167	Soils	This project has been planned and will be conducted so that land management activities keep erosion rates within background levels. Refer to mitigations in Appendix B of the EA.
Drop construction of all temporary roads including the 26 miles of temporary roads in on soils with high erosion hazard. (page 199)	BMBP-168	Soils	Dropping all temporary roads would not meet the purpose and need of the project. This project has been planned and will be conducted so that land management activities keep erosion rates within background levels. Refer to mitigations in Appendix B of the EA.
Drop all logging planned for slopes >35% NCTing and prescribed burning could be by hand. (page 200)	BMBP-169	Soils	Ground-based equipment is typically only used on slopes under 30 percent. See Timber Management Standards and Guidelines of the WWNF LRMP (4-50).
Drop all heavy equipment use, including commercial logging for the 1,651 acrea in alt 2 or 1,511 acres in alt 3 of slopes with increases potential for landslides....(page 200)	BMBP-170	Soils	Dropping all equipment use would not meet the purpose and need of the project.
Drop all the landslide areas with moderate to high hazard levels from heavy equipment use and logging. Why are these risks being taken? (page 201)	BMBP-171	Soils	These areas were assessed with a Level 1 Slope Stability Assessment by Region 6 Geotechnical engineers and their report and recommendations can be found in the project file (Project File Exhibit E). This assessment provided the planning team with possible risks and recommendations to ensure all proposed activities within historic landslides or landslide prone areas will not create uncertain, unique or unknown risks to the human environment.
Drop construction of planned temporary roads located on landslide prone areas -4.1 miles under alt 2 and 1.3 miles under alt 3. Isn't this just common sense? (page 201)	BMBP-172	Soils	These areas were assessed with a Level 1 Slope Stability Assessment by Region 6 Geotechnical engineers and their report and recommendations can be found in the project file (Project File Exhibit E). This assessment provided the planning team with possible risks and recommendations to ensure all proposed activities within historic

			landslides or landslide prone areas will not create uncertain, unique or unknown risks to the human environment.
What good would a field inspection do after the damage is done? (page 201)	BMBP-173	Soils	Thank you for your comment.
All heavy equipment use and commercial logging should be dropped where detrimental soil impacts are expected to exceed the forest plan limit of 20% not just addressed with restoration efforts. (page 203)	BMBP-174	Soils	This project has been planned and will be conducted so that land management activities maintain or improve soil quality. Refer to project design criteria in Appendix B of the EA.
Are we the only ones opposed enough to detrimental soil impacts and landslides to call for their prevention through avoidance? (page 204)	BMBP-175	Soils	Comment considered.
These are extremely outdated laws now that the pace, scale and intensity of logging is not ecologically sustainable and given the need for maximum forest carbon sequestration..(page 204)	BMBP-176	Soils	Comment considered.
How does the expected outcome of thousand acres of detrimental soil impacts ...meet the NFMA requirement of no irreversible damage?(page 205)	BMBP-177	Soils	See project design criteria of the EA. More detail on how project design criteria meets soil quality standards and NFMA can be found in the Soil Resource Report.
How are the expected action outcomes in Table 88 consistent with the Region 6 FSM 2500-98-1 policy? (page 205)	BMBP-178	Soils	Soils impacts were analyzed, and project design criteria was created to meet FSM 2500-98-1 Region 6 Soil Quality Standards and Guidelines. Refer to Soil Resource Report for more details.
How does all this soil damage comply with 36CFR219.20 which requires conservation and protection of soil and water resources? (page 205)	BMBP-179	Soils	Soils impacts were analyzed, and project design criteria was created to meet 36CFR219.20. Refer to Soil Resource Report for more details.
There is no analysis justifying the moderate cumulative effects finding rather than high cumulative effects...(page 207)	BMBP-180	Invasives	It was not clearly stated, but the reason for my designation of "Moderate" for cumulative effects is because of the offsetting projects and measures. Among these are the focused invasive plant

			treatments before and after the project, the Patrick post-sale road management plan, and the collective PDCs in Appendix B. Without these aspects of the proposal, the cumulative effects would certainly be “High”.
Why is there no stated plan in the EA to identify buffer and avoid heavy equipment use and ground disturbance near and in the 1,100 acres of invasive plant populations within the project area? (page 209)	BMBP-181	Invasives	In Appendix B it states: “Project personnel would inform invasive species personnel pre-seasonally annually of upcoming project activities (i.e. ground disturbing activities), so reprioritization of treatment (if deemed necessary) and inventory can begin prior to the start of project activities.” It is not clear here, but Project Managers will have a map showing the weed inventory sites. Before work starts in a project area they will contact the invasive plant coordinator if there is a weed inventory site there. The weed specialist scout the site and give guidance such as adjusting the timing of work to avoid seed dispersion or designating an Area-to-Avoid.
Why aren’t the existing invasive plant species identified and analysis devoted to preventing their introduction and dispersal as required by the 2005 Region 6 Forest Plan Amendment? (page 209)	BMBP-182	Invasives	In Appendix B it states: “To reduce the potential spread from known invasive plant sites, these occurrences would be identified as Areas-To-Avoid for moderate to high-risk ground disturbance activities. Coordination will occur with invasive species specialists for exceptions.” Existing invasive plant populations are variable from season to season. Invasive plant treatment is prioritized in areas with proposed ground disturbing projects. The reduction of seed production that occurs due to these advance efforts is an effective practice aimed at preventing the dispersal and spread of invasive plants. Designating Areas-To-Avoid is a strategy to prevent the spread of invasive plants by restricting passage through invasive infestations that are

			concurrently ripe with seed.
We support the Oregon Wild proposal that commercial logging and road building and closed road reopening be excluded from the Czar springs unroaded area. (page 214)	BMBP-183	Recreation	Czar Spring area is not a FS recognized road less area, so beyond the scope of this project.
The FS does not disclose in the EA how much of the Czar Springs unroaded area actually has evident closed system roads that are overgrown and evidence of past commercial logging. This is inadequate analysis for undeveloped lands.....(page 214)	BMBP-184	Recreation	The Czar Springs area does not meet FS requirements for inventoried roadless areas, due to the size of the area.
The recreation and visual effects analysis in the EA ignores the recreational use and recreational values of the Czar Springs Unroaded Area and the foreseeable management impacts to that area from Patrick sale actions even though the recreational use of that area is mentioned on the previous page (page 216)	BMBP-185	Recreation	Czar Spring area is not a FS recognized road less area, so beyond the scope of this project.
The Recreation section also fails to identify the Czar Springs Unroaded Area with fewer roads in the ROS section. (page 216)	BMBP-186	Recreation	The area falls in the 'roaded natural' class of the ROS. Re-classifying the area is outside the purpose and need.
Since the majority of the project area is in the Visual Quality Objective management area of Partial retention, how would management of every acre of the project area...keep management activities visually subordinate to the characteristics visual landscape and not visually evident? (page 217)	BMBP-187	Recreation	58% of the project area is in the VQO of partial retention, which means that people can perceive that areas of landscape have been slightly altered. 36% is in VQO of modification or maximum modification.
There is no consideration in the EA of potential avoidance of negative impacts to recreational uses, such as for dispersed camping, hiking....or of potential mitigation	BMBP-188	Recreation	Recreational activities, including hiking and dispersed camping, were considered in the cumulative effects section. See Appendix A.

for these impacts. (page 218)			
Just saying that direct effects to visuals would be minimal is not enough as the analysis does not clarify how the partial retention objective of management activities being visually subordinate to the characteristic landscape would be achieved. (page 219)	BMBP-189	Recreation	Characteristic landscape in the area has been disturbed previously over most of the project area
This is inadequate cumulative effects analysis in the Recreation section. (page 219)	BMBP-190	Recreation	Cumulative effects were considered in the analysis. See Appendix A.